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ABSTRACT

In this study, criticism of the ideas of Maria Montessori made by educators from 1910 to 1925 are assessed and contrasted with other information about the Montessori approach. After an introductory description of the study's purpose and scope, chapter 1 offers information related to the life of Montessori and to her major ideas, and notes criticisms directed toward Montessori as a person and toward her method. Chapter 2 examines arguments and criticisms focused on the Montessori classroom environment and materials. Chapter 3 categorizes criticisms according to the following groupings: work/play, social development, freedom, sensorial materials, correction of errors, problem-solving opportunities, and creativity. This chapter additionally describes aspects of Montessori's theory and relates them to the criticisms given earlier. Chapter 4 explores the role of the teacher in the Montessori learning environment, and chapter 5 describes and responds to more recent criticisms of Montessori educational practices. Finally, chapter 6 describes a well-prepared, ideal Montessori environment, showing how Montessori's approaches and theories come together in a real classroom situation. Appended are a list of Montessori's early interpreters, summary statements of Montessori's basic principles and contributions as analyzed by others, and a list of children's sensitive periods in relationship to curriculum content areas. (RH)

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DEFINING AND EXAMINING AREAS OF CRITICISM CONCERNING THE PEDAGOGICAL IDEAS OF MARIA MONTESSORI WITH EMPHASIS ON THE CRITICS AND THEIR CRITICISM FROM 1910-1925

A thesis submitted in partial fulfillment
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by

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1984

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DEFINING AND EXAMINING AREAS OF CRITICISM CONCERNING THE PEDAGOGICAL IDEAS OF MARIA MONTESSORI WITH EMPHASIS ON THE CRITICS AND THEIR CRITICISM FROM 1910 - 1925.

Dr. Maria Montessori (1870 -1952), the first female Italian physician, electrified educational thinkers at the turn of this century. At that time she introduced a new method of studying the child which resulted in an innovative educational program. Details of Montessori's history can be found in Section 1.1, but some general background information is needed here for an introductory perspective. First of all, Dr. Montessori's original idea for a career did not include teaching children. Education was generally thought to be the only appropriate career for women during her era but it was not a career Montessori would even consider. As the first female in Italy to receive a doctorate in Medicine, Montessori got into the educational area through the back door, initially working with "feeble-minded" children in Italy who were doomed to a lifetime in insane asylums. She was invited to create a learning environment for slum children in the tenament of San Lorenzo and created what is now famously known as Casa dei Bambini. What excited the world more than anything was the news that she had "tamed" wild children. These children, who were unsupervised during the day, had been defacing and destroying buildings until Montessori was asked to create some sort of an area for them which would resolve the problem of damage to the buildings. Coming from her recent experiences with retarded children, Montessori was thereafter excited by the challenge to observe and experiment with educational ideas for normal children. As is true of all innovation, Maria Montessori's ideas received a wide range of reactions. There was intense interest in observing and evaluating her pedagogical proposals, and educators from all over the world traveled to Italy to observe these classrooms in her Casa dei Bambini firsthand.

The purpose of this paper is to examine criticisms concerning ideas that Maria Montessori drew from her observations, experimentation and experience with educating children. During my extensive research I discovered that, on the whole, Montessori's ideas have been extremely distorted and misunderstood. A significant number of her contributions have become assumed knowledge for educators in today's classrooms, but there is very little appreciation for or perspective on the influence of Maria Montessori's ideas. Though many evaluators and interpretors from around the world worked hard to provide an unbiased perspective on what Montessori had to offer, the criticisms have not yet received an organized appraisal. My purpose in researching this paper is to explore and examine the criticisms that were directed toward Montessori's ideas and to contrast those criticisms with detailed information about Montessori. This paper will address the critical examinations of Maria Montessori's approach to education made by educators primarily during the period of 1910 through 1925. A short chapter on recent perspectives is added toward the end of the paper.

Maria Montessori never directly addressed her critics. She chose to respond to criticism in only a very general way, by reiterating her ideas and asking the educational community to observe her principles in action. Radice quoted her on this matter as follows: "'I have never yet succeeded,' Dr. Montessori says, 'in convincing anyone by word of mouth. I think some new form of language will have to be developed to express this new phenomenon. Fortunately, the children are there, behaving as I say they behave, and people who do not believe me can go down into the schools and see! But then there is the difficulty, with so much opposition of establishing the proper school conditions where these things can happen! Nobody likes me any more than they do any other constructive worker in education, because it is a good deal of trouble to reconstruct. At the same time almost everyone agrees, instinctively, with a fine piece of destructive criticism. In fact, when conferences are held and articles written to consider education from a destructive point of view, people say that of course this is all TRUE, but it is nothing NEW. When the new is provided they will not try it, because it might be wrong.'"(1) Montessori also felt that she simply could not spend the time and energy being side-tracked by criticisms when she had so much to do in observing children and designing an appropriate learning environment for them.(2)

Most of us think of Montessori's ideas as pertaining only to pre-school child. In fact, before Montessori died in 1952 she had the detailed an educational program through elementary school and had outlined very specific ideas for junior-high and high-school aged children. The criticisms that were directed toward Maria Montessori during the period 1910-1925 were specifically directed toward her ideas for the pre-school child, however, so that interest takes primary weight within this paper as well.

I have not attempted to evaluate whose educational ideas are most valid. I have limited the scope of this work to examining the criticisms and to contrasting them with what Montessori actually proposed. I hope to show by specifically defining the areas of contention and clarifying Montessori's complex messages, that there are not as many differences of opinion between critics and advocates of Montessori's ideas as is commonly believed. Though there is a great deal of room for detailed, constructive criticism of Montessori's methods and theory, by and large the criticisms I have found are rooted in misunderstanding and oversimplification regarding Montessori's approach.(3)

The task of examining the criticisms related to Montessori's ideas yielded many significant problems. The critics, no less than the advocates, had to cope with a number of difficulties when examining Montessori's ideas. These are explored first, as follows.

1. Montessori's Writings:

First of all, Maria Montessori offered us no composite piece of literature. We have an assortment of books, written lectures transcribed by students, articles written by Montessori, newspaper articles from interviews with her or from observations of the classroom, educational societies' annual reports, speeches, etc. We have to read many, many sources to begin to get a complete picture of what Montessori proposed about classroom practice. Montessori recognized this problem. She urged E.M. Standing, a student of philosophy who met her in 1921, to create a "systematic presentation of her principles and practice." Standing's book, MARIA MONTESSORI: HER LIFE AND WORK, printed in 1957, was a result of thirty years of "close collaboration with Maria Montessori."(4) It served Montessori's request well and along with Paula Polk Lilliard's book MONTESSORI--A MODERN APPROACH, continues to offer an excellent overview.

In addition to this problem of having no complete description by Montessori, each of Montessori's writings address specific areas. She tended to focus on a particular frame of reference and to offer an appropriate perspective for specific audiences when she wrote her books, contributed to educational journals, spoke to groups or was interviewed for newspaper articles. We can get a terribly distorted view of Montessori's ideas by expecting one book or one article to be an adequate foundation for understanding her ideas. One good example of this is the frequently found statement "our aim of education is." Knowledge of the particular area of theory which Montessori was addressing is absolutely necessary if one is to understand where that particular "aim of education" was to fit in her total schema. Sometimes, for instance, Montessori's writings referred to "the aim of education" in reference to a specific piece of equipment. At other times she was referring to much broader goals.

Paula Polk Lillard, in her book, MONTESSORI--A MODERN APPROACH, noted: "Although Dr. Montessori wrote many books on her general philosophy and method, she did not write a textbook explaining exact procedures in detail for either the home or the classroom. Perhaps she was apprehensive that such an explicit statement might tend to render her ideas inflexible."(5) This leaves the interpreter of Montessori the immense task of researching and absorbing many varied sources before having adequate information about what Montessori intended. Alternately, the reader of only one or two sources takes a great risk of having a markedly inadequate view.

There is also a problem with terminology. Montessori used her terms loosely, changing the meanings of the same words in different contexts and offering us different words for the same contexts within the same set of writings. Critics also assumed definitions based on their own definitions, making inaccurate assumptions about Montessori's meanings and purposes. Part of the difficulty with terminology is also related to the problem of translations. My resources and the resources for most of the critics and advocates I researched, were English translations from original texts in Italian or French. Rita Krammer, in her biography of Maria Montessori, presented a good example of this potential problem of distorted meaning when she discovered that Montessori's word "intuitively" was translated into English as "instinctively."(6) That sort of translation only served to aggravate critics already turned off by her popularized announcements that she had solved many of the problems of education. Another significant example in the problem of translation was the English title of her first book, known to us as THE MONTESSORI METHOD. The Italian title is THE METHOD OF SCIENTIFIC PEDAGOGY APPLIED TO INFANT EDUCATION. American publishers decided that that title just wouldn't sell, and as a result, the American public has mistakenly perceived that Montessori was offering a method of education when in fact she was proposing a method of inquiry into determining the education of younger children. In Robert Bentley's foreward to a 1965 English edition of THE MONTESSORI METHOD (Cambridge, MA: Robert Bentley, Inc.), he commented: "Unfortunately, a quality of near illiteracy--some take this to be the deepening mysticism of Montessori's later period--obscures the meaning of almost everything published on education over Montessori's name after 1920. Here we confront not just the sloppy and irresponsible work of translators but the uncritical acceptance of the translators' unpublished works by Montessori's English-speaking followers."(7) Our reliance upon English interpretations and translations inhibits our ability to get complete and accurate perspectives solely from written sources.

Another important perspective is to realize that many of the books published under Maria Montessori's name were originally lectures given during teacher-training programs or speeches to general audiences. The individual biases and levels of comprehension of those who were transcribing her thoughts severely limit the accuracy of these materials. Unfortunately, Montessori never wrote out her oral presentations and so we must rely heavily upon those who were close to her to interpret her ideas for us, particularly in English.

An extremely important point to note is that the central purpose of Montessori's writings whether in books, lectures, or journal articles, etc. was to offer the world her new insights, the results of her new method of scientific inquiry, those concepts which had not been recognized or appreciated before. She did not write of those aspects of education which she felt were obvious or already available in classroom practice. In particular, this created problems when critics, as well as advocates, interpreted what Montessori proposed to include within the classroom. For example, Montessori frequently did not write about the extent to which art, music, and other aesthetic activities were pertinent because she didn't feel she had anything new to offer on the topic. Some readers assume that each of her books represented a complete whole, a composite of what Maria Montessori considered to be essential to offer the child in the classroom. The negative consequences were two-fold: 1) critics were appalled at what Montessori left out of her curriculum and; 2) some Montessori educators, with an inadequate perception of Montessori's intention, did leave out essential aspects in the classrooms.

A very frustrating difficulty that I found in researching this subject lay in trying to track down references. The page numbers provided in footnotes, etc., are often no help because there are so many editions and translations of each of Montessori's books. I must note here that there are occasions in this paper where I refer to different editions than those I have listed in my Bibliography because I simply couldn't find the exact quote in the main edition from which I was working.

A final note on Montessori's writings should be directed to the era in which she wrote. Her style was very much the flowery, exuberant, descriptive writing found among Italian authors in her day. Many of her critics simply didn't have the patience to get through the rhapsodic passages to find the valuable insights about fostering the development of children.

2. Montessori's Ideas:

Maria Montessori offered the world a complex, integrated set of ideas. What very few of her critics appreciated was that Montessori's pedagogy was not equal to the sum of its parts. It is simply invalid and inaccurate to compare her integrated program with particular segments of other programs. For examples, when William Heard Kilpatrick criticized the art program in a Montessori classroom and compared it with what was offered in his progressive program, he failed to realize that while his art program was complete in and of itself, Montessori's program was related to dozens of other aspects within the classroom and that it was simply not valid to evaluate the art program without recognizing each and every one of those other essential aspects of the classroom which related to art.

Another problem related to researching Montessori for both the advocate and the critic is that Montessori made it all sound so deceptively simple. She gave very little indication in her writings of just how complex her ideas really are. Also, Montessori made so many intuitive and sensitive observations of the child that she didn't fully appreciate how difficult it would be for most educators to be as finely attuned to the child. As a result, her assumptions about the capacities and abilities of educators to interpret her ideas as she intended them was grossly overrated.

As a result of the complexity of Montessori's ideas you will find within this paper repetitions of some specific ideas as they relate to numerous criticisms. This is an attempt to reduce both the confusion and some of the otherwise necessary segmentation in evaluating Montessori's ideas.

3. Interpretations of Montessori, What Is Montessori?

Montessori's ideas about education have been interpreted as being just about everything in the spectrum known to us in the education field. To some, Montessori's educational system is considered extremely rigid; to others it is considered to be loosely organized and undisciplined. Jean Keough, in her dissertation "American Writings on Maria Montessori" noted that the Montessori "system has been for each perceiver whatever he saw in it."(8) Keough went on to say: "to focus on different people's statements about Montessori's significance is, to some degree, to examine differences among people, their purposes, and their pictures of the world."(9) Despite the difficulties already noted, it is difficult to understand how people could come to have such diverse opinions and attitudes about what Montessori really said about particular concepts in the classroom. Ethel Wheeler, in her dissertation "How 'Montessorian' Are the Montessori Schools?" noted, moreover, that "among the schools visited the Montessori name was simply not a reliable guide to a parent seeking a Montessori environment for a child." Wheeler found that "At best, one could expect to find a school with commercially available Montessori materials." Wheeler felt that a Montessori school, in its full meaning and function, was a rare find.(10) What becomes obvious is that the key to these differences and the key to the interpretation of Montessori depend upon the individual teacher and the individual classroom as well as the significantly different needs of populations of children in different cultures throughout the world. The teachers' personal needs and capacities enhance and limit their abilities to interpret Montessori. People are attracted to Montessori for very different reasons as well. For example, people who seek order and structure within the classroom can be distinctively different from those teachers and parents who seek control within the classroom. These represent two extremely different qualities: order and structure vs. control; and they reflect different needs, which thereby generate very different interpretations of Montessori's ideas as applied in the classroom. Furthermore, the outward appearance in the classroom may seem very similar to the uneducated eye. Both classrooms may seem ordered and quiet, for example. The children will appear to be engaged in constructive, productive activity. But the differences may be as significant as contrasting an internal skeleton, which provides internal support and much room for free movement, with an exo-skeleton, one which creates external control and is in fact, quite limiting, though very neat and orderly.

Another area that determines differences in interpretations is the fact that writings from Montessori simply do not always agree with what have become known as the traditions found within the classroom. Neither source [of written materials or anecdotal traditions] is complete and neither offers us any absolute ideas about what should be happening in the classroom. In fact, there are writings which seem contradictory to each other, as well as extremely diverse traditions. As is true of any particular method of education, we can find ultra-orthodox, orthodox, conservative and reform Montessori throughout the world. Thomas J. Banta in his article "Montessori: Myth or Reality" made another important point: "The 'basic Montessori philosophy'," he said, "is continuously undergoing change, either in the form of different interpreters, or in the form of modifications of the original conceptions in the light of psychological and child development research."(11) For these reasons, juxtaposing 'What Montessori meant' against various criticisms must be done with much caution. My efforts to locate all possible sources of information, including the arrangements for several interviews with educators who were trained by and had personal contact with Maria Montessori, were made in order to minimize the opportunity for error.

4) Critics and Advocates

Before moving on to the details, we need to focus a bit on the interpreters of Maria Montessori's ideas. In 1906, Montessori's first experiment in San Lorenzo at the Casa dei Bambini received international attention. Visitors, including teachers, journalists, parents, government officials and scientists, were enthusiastic about their observations. An example of a newspaper account: "No one who has visited any of the Casa dei Bambini can fail to have been struck by the intelligence of the children, by their frank, simple manners, neither forward nor shy, by the atmosphere of happy activity, and by the sense of discipline that is largely voluntary and rises out of this same activity."(12) North American professors of education were quick to ascertain any suggestion of superior learning opportunities specifically attributable to a Montessori learning environment. The Gesells, who observed Montessori classrooms in Rome, while writing of "excellent results," were careful to ascribe "the large moral and motor results" to a "free-hygienic environment and the power of superior personalities"[teachers, not method].(13) S.A. Morgan cautioned: "These results truly seem remarkable, but, when we examine them more closely we are compelled to ask whether they really proceed from a SPIRITUAL HEIGHT attained through PSYCHIC development, or are not rather the result of assiduous training that is largely physical. Anyone acquainted with child nature is fully aware of the seemingly wonderful results that may be obtained through physical training without any adequate corresponding development in the mental life."(14)

I came to find an intriguing division between those who became published critics and those who became published advocates of Montessori. The intrepretors lined up between those who were in academic education (i.e., teachers of education), and those who actually taught within the classroom. The most vehement criticisms came from William Boyd, Scottish educational philosopher; R.J. Fynne, a Dublin educator; Gesell and Gesell, well known child psychologists, at their Institute of Child Study; William Kilpatrick, a protege of John Dewey who was an immensely popular and articulate professor of the Columbia Teacher's College, and the popular representative of progressive educators and other child study movement leaders, such as Michael O'Shea and Elizabeth Ross Shaw. A couple of exceptions to this rule were Edward P. Culverwell, a professor from Dublin University, who was mostly pro-Montessori; Martha MaClear, who wrote of applications of Montessori principles for Froebelian kindergartens; and Florence Elizabeth Ward, who was a professor of education from Iowa State Teachers College, who went to Rome to investigate Montessori in order to be qualified to lead curriculum seminars for teachers. Within the education field, almost without exception, Montessori's advocates were teachers interested in exploring the value of applying Montessori's ideas within their own classrooms. The critics seemed to be removed from direct contact with students, more theorist than practical applicator, notably those teaching teachers. Montessori also attracted many psychoanalysts and psychologists. Anna Freud and Lili Roubiczek Peller, for example, both felt that Montessori provided an ideal opportunity for meeting the total needs of the child within the classroom.

"Appendix A" provides a clearer perspective and reference on "who's who" in relation to Montessori's ideas. In addition to the overt advocates of Montessori some significant personages should be mentioned here. Jean Piaget and Erik Erikson both interesected with Montessori in extremely significant ways. Jean Piaget headed the Swiss Montessori Society in the 1930's. The lab school at his institute in Geneva was a "modified" Montessori program and many of Piaget's ideas relate to his experiences observing Montessori classes. Erik Erikson completed the two year Montessori training program in Berlin. Anna Freud used the laboratory school attached to this training program for many of her observations of children. She also worked with Montessori teachers on a regular basis including those in the Vienna Montessori School. I interviewed three educators from this school: Elise (Lisl) Braun Barnett, Annie Hermann and Emma Plank.

To give a perspective on ages and time-references, Sigmund Freud was Montessori's contemporary; Anna Freud, Erik Erikson and Jean Piaget were of the next generation. Other personages that should be noted are Margaret Naumberg, who spent many years as a Montessori teacher before going on to create her own ideas in the form of the Walden schools; Helen Parkhurst, who was a significant American influence in Montessori before she went on to create her Dalton Plan for the older children; Bertrand Russell and Jerome Bruner who make references to Montessori, appreciating a number of aspects within her pedagogy. (As an intriguing sidenote, Alexander Graham Bell and his wife Mabel, as well as Margaret Wilson, were influential in introducing Montessori in this country during the 1910's.)

A number of significant books and chapters were written about Montessori during the period 1910 to 1925. Among the critics, William Boyd wrote FROM LOCKE TO MONTESSORI - A CRITICAL ACCOUNT OF THE MONTESSORI POINT OF VIEW (1914); R.J. Fynne - MONTESSORI AND HER INSPIRERS (1924); Beatrice and Arnold Gesell wrote a chapter on "Montessori Kindergarten" in their book THE NORMAL CHILD AND PRIMARY EDUCATION (1912); William Heard Kilpatrick wrote THE MONTESSORI SYSTEM EXAMINED (1914) in addition to a number of articles; and S.A. Morgan wrote THE MONTESSORI METHOD: AN EXPOSITION AND CRITICSM (1912). Among those who offered primarily positive assessments were Edward P. Culverwell, THE MONTESSORI PRINCIPLES AND PRACTICES (1914); Martha MaClear THE KINDERGARTEN AND THE MONTESSORI METHOD (1915); Florence Elizabeth Ward, THE MONTESSORI METHOD AND THE AMERICAN SCHOOL (1913); and Jessie White, MONTESSORI SCHOOLS AS SEEN IN THE EARLY SUMMER OF 1913. Interpreters who became avid enthusiasts included Anna Maria Maccheroni, MONTESSORI--A TRUE ROMANCE (1947); Carolyn Bailey, MONTESSORI CHILDREN (1915); Sheila Radice, THE NEW CHILDREN: TALKS WITH DR. MARIA MONTESSORI (1920); Robert Rusk, chapters about Montessori in his books THE HISTORY OF INFANT EDUCATION (1941) and DOCTRINES OF THE GREAT EDUCATORS (1969); Theodate Smith, THE MONTESSORI SYSTEM IN THEORY AND PRACTICE (1912); Ellen Yale Stevens, numerous articles and a book called GUIDE TO THE MONTESSORI METHOD (1913); Nancy McCormick Rambusch, LEARNING HOW TO LEARN: AN AMERICAN APPROACH TO MONTESSORI (1962); and E.M. Standing, MARIA MONTESSORI: HER LIFE AND WORK (1957) and THE MONTESSORI REVOLUTION IN EDUCATION (1966). Mario Montessori and Mario Montessori Jr., son and grandson of Maria, wrote numerous papers elucidating Maria Montessori's work. Mario Jr., a trained psychologist, wrote a book called EDUCATION FOR HUMAN DEVELOPMENT--UNDERSTANDING MONTESSORI (1976).

It should be noted here that while I have focused on the critics and criticisms directed toward Montessori during the period 1910 - 1925, I have not limited my resources to that period for those who were interpreting and explaining Montessori, which explains why many of the writings of pro-Montessorians do not fall before the 1925 range.

I'd like to juxtapose two diverse opinions published in 1912 and 1913, respectively, which reflect the extreme interpretations Montessori received: Michael Vincent O'Shea of the Child Study Movement wrote: "The whole Montessori method is about where the American system was twenty- five years ago. It is a great improvement upon general Italian practice in Rome, but it does not give the American teacher a new point of view which will be of service to him."(15) George Jacoby, analysing the Montessori approach from a physician's viewpoint referred to Edmond Holmes' elaboration on what an Utopian school system might be with what he felt Montessori education had to offer, from Holmes' writings in WHAT IS AND WHAT MIGHT BE IN EDUCATION: "The type of education which flourished in the soil and atmosphere of Utopia developed children of 'activity, versatility, imaginative sympathy, a wide and free outlook, self-forgetfulness, charm of manner and joy of heart.' Whoever has seen a class of Montessori infants would regard these words as a forecast of their future."(16)

Reflecting upon the extreme reactions to Montessori, Eleanor Nicholson noted: "Frequent criticisms of Montessori focus either on what the critics perceive to be rigidity in the approach or on what other critics perceive to be the lack of structure and the granting of 'too much freedom' to the child".(17) She wondered how we could begin to explain the contradictory assessments of Montessori's approach to education, and she drew the parallel of the Indian story of the seven blind men describing an elephant from individual points around the elephant. Each one felt that he had the essential grasp of the nature of the elephant. As was mentioned before, I think that the interpreters of Montessori fell into two basic camps. On the one side was the academic professor who attempted to analyze what all the public attention was about, whose focus was to offer a particular philosophy and perspective on education to students of education and who wanted to determine what, if anything, Montessori had to offer which would improve upon his own ideas about education. In the other camp were mostly teachers who were used to exploring a number of different curricula and sets of materials for practical application in their own classrooms and who were faced with Montessori's innovative approach to providing education within the classroom. Montessori's advocates saw application for an approach to education based upon a new system of examination and experimentation, a system that credited the teacher for his or her function as a catalyst and stimulator in the classroom in contrast to the traditional one based upon textbooks and dictated knowledge. The academic's purpose was to evaluate Montessori's philosophy and psychological contribution along the continuum of educational theory at large. Montessori's advocates were primarily teachers who found Montessori offering a whole range of useful techniques and concepts for the classroom. Not all professors of education were critics, however. Rusk, Culverwell, Smith, McClear and Ward were among those earlier professor-investigators who came away with positive impressions about Montessori pedagogy.

Montessori's critics as well as her advocates varied in their abilities and desire to comprehend and express her ideas. It is interesting to note that the most vehement of her critics indicated minimal comprehension of how the classroom actually functioned or of how Montessori's ideas were integrated into a complete program. The academics frequently tried to compare and contrast the availability and use of specific materials which, if used in a traditional classroom, would be considered an independent aspect of the curriculum; while in a Montessori classroom each was only one component of an inter-related and indivisible learning environment. The reading of stories is an important example of this idea. Many critics came to the conclusion that Montessori did not believe in stories because she discouraged the use of "foolish" stories and didn't write of specific presentations or line-activities for group-presentation of books. In fact, the reading of stories occurred throughout the Montessori day. The stories were read as they related to particular activities in the classroom, to particular individual children, as well as when individual children's interests determined their desire to be read a story or to read stories. The critics were often quick to attack with little or no perspective on intended application of specific ideas.

Frequently Montessori's critics had inappropriate age references when they were evaluating Montessori. I will cover this more thoroughly in Section 3.0, particularly during the discussion of "planes of development." As many critics do when their ideas are founded on shaky ground or inadequate comprehension, Montessori's interpreters frequently generalized and created totally inaccurate impressions about the application of her ideas in the classroom. Boyd, Kilpatrick and Morgan made particularly strenuous objections by suggesting absurd conclusions based on inaccurate and incomplete information. For example, Morgan claimed that Montessori sought anti-social behavior and that she was teaching children to be isolated because she sought opportunities for children which would lead to high levels of independence. Another fault with the critics was their failure to appreciate the context. This tended to be true of the orthodox Montessori teacher as well. As A.M. Joosten noted, "There is a rather too ready tendency to consider things in an absolute way, giving them only one interpretation, thus overlooking a relativity that very largely depends upon ourselves."(18) Joosten suggested two very important points. One: we cannot determine the "goodness" or "badness" of any particular technique or material without placing it within a particular circumstance. Two: it is our responsibility as educators to determine the quality of things as they relate to particular situations.

A significant and frequent failure of the critics was an almost constant attributing to Montessori of those situations, techniques, and interpretations which were truly the responsibility of individual teachers in particular classroom settings. I found myself agreeing over and over again to particular criticisms being raised but concluding that what was often being criticized simply wasn't Montessori. Another failure of the critics, intentional or not, was the creation of false dichotomies based on various levels of understanding Montessori. For example, critics suggested that Montessori's desire to satisfy the developmental needs of the individual child in the pre-school classroom and her emphasis on individual instruction during this period, was directly opposed to group-learning or group instruction and that it denied the social developmental needs of the children as well as the group. Another example is a false dichotomy concerning the attitudes of freedom versus control or freedom versus structure in the classroom. These will all be explored more completely in section 3.0.

Finally, I found the tendency for critics to confuse results with goals. For example, there were criticisms directed toward the unusually quiet and productive appearance of the classroom, as well as the 'academic achievement' of children in Montessori classrooms. These critics assumed that these were goals that were actively sought by Montessori. In fact, they were by-products ... natural results of other, more pertinent aspects of the classroom. There was failure to note, for instance, whether the quiet classroom was a strained and tense atmosphere, versus what is traditionally seen in a Montessori classroom: an active and productive atmosphere. (I should note here, lest I leave the wrong impression, that not all Montessori classrooms are "quiet" and certainly none is "quiet all of the time."}

Structure of the Paper:

It is with great difficulty and caution that I break down Montessori's complex and integrated program of ideas in order to analyze and examine the parts. We must realize that it is an artificial breakdown for our convenience in order to get into the details of discussing particular areas of criticism, recognizing that integration is absolutely necessary to get an idea of how the parts fit together. As we go through the paper we will be reminded from time to time how limiting and tentative these subdivisions are, that they do not deal in complete and effective ways with our topic. I will do my best to minimize this confusion and try to provide a sense of completeness as I pull together some of the ideas in Section 6.0: "The Child's Experience." As noted before, because of the complexity and artificiality of these categories there will be some repetition in order to clarify each particular area and to give an idea of how each area fits into the whole picture. Montessori did not do this sufficiently in her writings and assumed the reader's capacity to do it on his/her own, which resulted in some of the confusion with which we are plagued today.

1.0 MARIA MONTESSORI:
  1.1 Personal History
  1.2 Discoveries
  1.3 Outline of Basic Principles
  1.4 Criticism Focused upon Montessori
    1.4.1 Montessori's personal influence
    1.4.2 method as unscientific
    1.4.3 method as rigid
    1.4.4 exaggerated expectations
  1.5 Conclusions

2.0 APPROACHES IN THE CLASSROOM ("METHODS"):
  2.1 The Didactic Materials
    2.1.1 limitations
    2.1.2 question of artificiality, formality
    2.1.3 question of inflexibility (requiring "correct use," not "creative")
    2.1.4 high cost of materials
  2.2 Play Materials
  2.3 Use of Dramatic Arts
  2.4 Lack of Humanities Exercises
  2.5 Limited "Creative Arts" Opportunities
  2.6 Teaching Reading and Writing

3.0 THEORETICAL CONCEPTS:
  3.1 The Criticisms
    3.1.1 Work/Play
    3.1.2 Social Development, Individual Work Emphasis vs. Group Instruction
    3.1.3 Freedom
    3.1.4 Sensorial Materials (Didactic)

        3.1.5 Correction of Errors
        3.1.6 Problem-Solving Opportunities
        3.1.7 Creativity
    3.2 Montessori's Theory
        3.2.1 Purpose of Education
        3.2.2 Planes of Development
        3.2.3 Freedom (Liberty, Structure, Limits, Spontaneous Activity, Independence, Dependence, Individuality, Discipline/Self-Control, Obedience/The Child's Will, Rewards and Punishment, Choice/Initiative)
        3.2.4 Needs of the Child
        3.2.5 Creativity/Imagination/Intelligence (fantasy, fairy-tales)
        3.2.6 Social Development, Individual vs. Group Instruction
        3.2.7 Purpose of the Didactic Materials, Isolation of Features
        3.2.8 "Child's Work"
        3.2.9 Problem-Solving Opportunities in the Classroom
        3.2.10 Errors

4.0 THE TEACHER:
    4.1 Criticisms
    4.2 Montessori's Description
    4.3 Teacher Training

5.0 SOME RECENT CRITICISMS/PERSPECTIVES:
    5.1 National Association for the Education of Young Children (NAEYC)
    5.2 Valerie Suransky
    5.3 Rita Kramer

6.0 THE CHILD'S EXPERIENCE--A DESCRIPTION:
    6.1 Classroom Description (the prepared environment)
        6.1.1 Practical Life
        6.1.2 Sensorial
        6.1.3 Language
        6.1.4 Math
        6.1.5 Cultural
        6.1.6 Science
    6.2 New Class
    6.3 Growing, Established Class, New Year
    6.4 Day-to-day
    6.5 Some Additional Considerations
        6.5.1 The Hours in the School Day
        6.5.2 Teacher-Child Ratio
        6.5.3 The Outdoor or "other-than-basic-classroom" Learning Environment
    6.6 Conclusions

7.0 CONCLUSIONS AND PERSPECTIVES

RESOURCES:

All of my Montessori resources were English translations from the Italian or French writings of Montessori or from her lectures that were translated into English by individual interpreters. All of the critics' and advocates' writings were those available in English as the primary language. I used everything I could get my hands on, written or spoken by Montessori and about Montessori. In addition, I had personal interviews with four women who knew Montessori and who worked under her guidance in Europe during the 1930's. Annie Hermann, Lisl Braun Barnett and Emma Plank worked in the Vienna Montessori House during the 1930's. They worked under the direction of Lili Roubiczek Peller, who directed the school and who was in constant contact with Maria Montessori (who came to visit the school on a regular basis). The fourth interviewee, Margot Waltuch, received Montessori training in London and is the only one of the four who continues to have a direct involvement with the Montessori organization. The three women who worked with Lili Peller in the Vienna Montessori school had weekly contact with Anna Freud, who helped these teachers evaluate the emotional/psychological needs of the children on a weekly basis. Annie Hermann continued to have extensive contact with Anna Freud in this country as the director of the Child Guidance Center in Manhattan. Lisl Barnett's interest always focused on music. Though she spent many years in the Vienna Montessori School and taught Montessori in India, most of her affiliation with Montessori was based on her interest in music. She created a music program at Montessori's bequest and became "the music teacher" in many classroom settings, rather than being the teacher of a particular classroom. She spent her World War II years in India with Maria Montessori, and after WWII came to this country, where she continued her work in teaching and music, specifically oriental music. Emma Plank came to America after the Nazis closed down the Vienna school in the late 1930's. She found her special training as a Montessori teacher as no help in starting a new educational career in the United States because of the apparent antagonism toward Montessori. She went through a master's program in this country and became an assistant professor of child development for the School of Medicine at Western Reserve University, eventually becoming director of Child, Life and Education at the Cleveland Metropolitan General Hospital. She described herself as using the spirit of Montessori in various settings, in particular, hospital settings, where children required educational programs. She did her master's thesis on the subject of Montessori math materials. It is important to note that Emma Plank's experience was with the elementary Montessori program; that is, ages six through twelve. I have used my interviews with these women as my primary link between Montessori's written word and her intended message. Lisl Barnett, in particular, had many close associations with Montessori, including several years in India where they worked together on a regular basis. When trying to sort out some of the confusing messages within Montessori's method of education, these women helped to provide a perspective which I might not otherwise have been able to gain. Montessori's writings include her books, a number of pamphlets, lectures written down by students and newspaper interviewers, educational society articles, articles written for newspapers, reports of speeches Montessori gave which were written down by others, sentimental stories about the application of Montessori, as well as direct interviews. To avoid taking sentences out of context, I have tried to cross-reference some of my references to Montessori's works. As a result, I have minimized the use of direct quotes from Montessori, because taking an individual sentence or group of sentences frequently did not provide an adequate or accurate image of the total idea.

The critics of Montessori had access to English translations of THE MONTESSORI METHOD (1912), DR. MONTESSORI'S OWN HANDBOOK (1914), SPONTANEOUS ACTIVITY IN EDUCATION: THE ADVANCED MONTESSORI METHOD (1917), THE MONTESSORI ELEMENTARY MATERIAL: VOLUME TWO OF THE ADVANCED MONTESSORI METHOD (1917), as well as those personal interviews, articles, and lectures available in popular magazines and newspapers. Most of the criticisms, however, referred only to Montessori's first book: THE MONTESSORI METHOD. To the best of my knowledge, William Heard Kilpatrick and Arnold and Beatrice Gesell were the only critics who visited Rome to observe Montessori classrooms and interview with Montessori directly. Those interpreters of Montessori who became advocates of her ideas who personally met with Montessori and observed her learning environments in Italy were Edward P. Culverwell, Carol Sherwin Bailey, Claude Claremont, Anne George, Anna Maria Maccheroni, Martha MaClear, Florence Elizabeth Ward, Sheila Radice, Ellen Yale Stevens, and E.M. Standing. I do not have complete enough information to feel comfortable with the impression left by the above list, which suggests more interpreters went away impressed than critical, though popular newspaper articles suggested this was the case.

1.0 MARIA MONTESSORI:

This next section offers information related to the life of Montessori, her major ideas and the criticisms which were directed toward Maria Montessori the person and her method as a movement. I have included this information as a useful reference which is needed in this examination of criticisms. This section is organized in the following way:

1.1 Montessori's Personal History
1.2 Discoveries
1.3 Outline of Basic Principles
1.4 Criticisms

1.1 MONTESSORI'S PERSONAL HISTORY:

1870: -born on August 31, in Italy, to financially comfortable and well educated parents, was an only child.

1886: -education at a technical school for boys ... explored interest and exhibited aptitude in mathematics and Education, the only career open to women at that time, was steadfastly rejected by Montessori.

1896: -graduated from medical school, University of Rome, as the first Italian female physician.
-became leading feminist and represented Italian women in Feminist Congress in Berlin.
-practiced medicine in clinics, hospitals and privately... positions varied: ten years of medical practice, special interest in the "nervous diseases of children" ... went to Bicetre and Salpetriere in Paris to study the subject. Her publications at this time were various, such as "The "Cephalo-Tachitic liquid in Paralitic Insanity," "The Case of a Solitary Tubercle in the Middle Brain," "The Influence of Culture on Reactions to Psychological Tests," "The Psychic and Anthropological Characteristics of Women of Latium," "The Influence of Social Conditions on the Mental Development of Children in Schools," "Anthropological Characteristics of Children Who are Judged As Either the Best or the Worst in Public Schools," and "Sexual Education Among Children."

1896-1906: Chairman of Hygiene (Health) at Magistero Femminile of Roma (one of the two universities for women in Italy).

1898: -began work with the "feebleminded," "hopelessly deficient" ... in charge of retarded children from insane asylum, considered beyond all medical help ... began to experiment with educational materials originally used as testing devices ... succeeded in moving all "idiot" and epileptic children from asylum in Rome to an Institute of Education - State Orthophrenic School where she supervised their education ... many of these children passed public examination tests for children in ordinary schools (1899-1901) ... with help of colleagues prepared a group of teachers trained in the observation and education of "feebleminded" children. She studied everything available on this topic ... came to special appreciation of French Dr. Edouard Seguin and Jean Itard agreeing with their supposition that mental deficiency should be dealt with as a pedagogical rather than a medical problem.

1900: -attended feminist Congress in London: spoke against child labor

1901: -gave up position at Orthophrenic School to study psychology and philosophy at University of Rome (in addition to her ongoing medical career).

1904-1908: Professor at University of Rome: taught anthropology to medical medical students and students in natural science and pedagogy, wrote (1904) first major publication entitled "Pedagogical Anthropology," lecturer until 1916.

1906/7-1908: first Casa dei Bambini established in San Lorenzo ... Montessori asked to create an environment for children of working parents who were unsupervised and damaging a tenement building, ... first experience with "normal children" ... was highly successful and acclaimed ... Montessori's involvement in education thenceforth was primarily limited to observation and work with "normal" children.

1909: -wrote: in Italian, first book on her pedagogical experiments: THE METHOD OF SCIENTIFIC PEDAGOGY AS APPLIED TO INFANT EDUCATION IN THE CHILDREN'S HOUSES.
-Maria Montessori gave up her medical practice and her two chairs at the University of Rome, became supported by her teacher training activity and eventually royalties.

1912: -translation of THE METHOD OF SCIENTIFIC PEDAGOGY AS APPLIED TO INFANT EDUCATION IN THE CHILDREN'S HOUSES into English by an American who had taken Montessori training, Anne George ... title changed by publishers to THE MONTESSORI METHOD ... translated into fourteen languages including French, German, Russian, and Japanese.

1913: -Montessori visits U.S.

1913-1914+: Montessori schools begin to appear in all parts of the world: all over Europe and Palestine, Siam, China, Canada, Chile, Argentina, Panama. Montessori schools flourished in Europe after World War I and until World War II when the

Nazis included her ephagy and books among those items burned in nations under their control.

1914: -English translation of DR. MONTESSORI'S OWN HANDBOOK.

1915: -returned to U.S., set up classroom for San Francisco World Exhibition (taught by Helen Parkhurst), gave teacher training courses in California.

1916: -gave up all chairs, lectures, roles as physician to devote life to pedagogical research for teacher training courses. writing and lecturing.

1917: -English translation of SPONTANEOUS ACTIVITIY IN EDUCATION: THE ADVANCED MONTESSORI METHOD and THE MONTESSORI ELEMENTARY MATERIALS, Vol.2 of THE ADVANCED MONTESSORI METHOD.
-traveled all over the world giving lectures and training courses, observing, researching and expanding her ideas.

1918: -last visit to the United States.

1925+: -International Teacher Training Courses and Congresses:

INTERNATIONAL MONTESSORI CONGRESSES:

1925	Helsinki
1932	Nice
1933	Amsterdam
1934	Rome
1936	Oxford
1937	Copenhagen
1938	Edinburgh
	World War II interruption (!)
1951	London

INTERNATIONAL TRAINING COURSES:

-London (every other year)
-Rome
-Milan
-Paris
-Berlin
-Amsterdam
-Nice
-San Francisco
-Barcelona
-Ceylon
-Madras, India
-Karachi, India
-Ahmedabad
-Kodaikanal, India

1932: -Publication of a lecture first given in 1922, as a book: PEACE AND EDUCATION.

1939-1946: spent WWII in India, given special exemption from being considered an enemy alien ... son was interned as an enemy alien for some time, however. When Italy entered WWII, Maria was confined to the school compound.

1946: -returned to Europe ... English translation of EDUCATION FOR A NEW WORLD.

1948: -first English translations of TO EDUCATE THE HUMAN POTENTIAL and WHAT YOU SHOULD KNOW ABOUT YOUR CHILD, RECONSTRUCTION IN EDUCATION and FROM CHILDHOOD TO ADOLESCENCE.

1949: -English translations of THE ABSORBENT MIND and EDUCATION AND PEACE (not the same as the 1932 publication of PEACE AND EDUCATION) and also, THE FOUNDATION OF MAN, later published under the title CHILDHOOD EDUCATION (1974).

1952: -Maria Montessori died in Holland on May 6.

1.2 Discoveries

Montessori felt her observations of the natural paths of the activities of children led her to some original insights with relation to their needs for optimal growth and development. Below is a brief sketch of those "discoveries" which she felt had not been examined or fully appreciated previously. Montessori's first rule was to "discover the true nature of the child and then assist him in his learning development."(19) "There was no method to be seen, what was seen was a child. ... We were able to observe natural psychic traits. These are not as apparent as the physiological traits of plants. A child's psychic life is so fluid that its natural manifestations can completely disappear in an unfavorable environment and be replaced by others."(20) ... "We must therefore create a favorable environment which will encourage the flowering of the child's natural gifts."(21) In the main body of this paper (2.0, 3.0, especially 3.2, 4.2) we will examine the particular environment in which this is possible. Below I will list those discoveries which Maria Montessori felt she was observing when children were put into a "free environment:"

> "We can draw up a list of his [the child's] preferences and of the ways in which he spontaneously manifests himself, and we can add to this what he rejects as a waste of time.
>
> 1. What he likes
>
> Repetition of the exercise.
>
> Free choice.
>
> Control of error.
>
> Analysis of error.

Analysis of movements.

Exercise of silence.

Good manners in social contacts.

Order in the environment.

Care for personal cleanliness.

Training of the senses.

Writing separated from reading.

Writing before reading.

Reading without books.

Discipline in free activity.

2. What he rejects

Rewards and punishments.

Spellers.

Lessons in common.*

Programs and examinations.

Toys and sweets.

A teacher's desk.

*This does not mean that in children's homes there are no lessons in common but rather than these are not the only, or even the chief means of instruction. Common lessons are used simply as introductions to special problems and activities."(22)

1.3 Outline of Basic Montessori Principles

The following collection of Montessori principles will be important to keep in perspective. It is with great discomfort that I attempted a compilation of Montessori principles because it is difficult, if not impossible, to include all the essential ideas. I have compiled a variety of other people's lists of Montessori principles in "Appendix B" as a back-up and to offer valuable nuances in possible interpretation.

The Child:

-Within each child lies the potential to become a happy, competent, self-fulfilled adult.

-It is the developmental task of each child to become independent and interdependent, according to specific cultural limitations.

-Each child's growth and development will be maximized through respectful, positive interaction with his/her environment. Frequent success in achieving personal goals and satisfying personal interests and needs insures high self-esteem, which in turn insures maximum growth and development.

-The child needs freedom to: explore and examine his/her environment; choose own activity and determine level of participation in it, as well as amount of time to devote to it; make mistakes; correct mistakes; interact as a member of a community...

-The child needs: love, respect, self-esteem, opportunity to pursue "real-life" activities...

-The child needs to develop, build and refine both fine and gross muscular skills and control. This requires sequentially progressive activities which develop specific skills in isolation first.

-The child needs to be able to think orderly and logically. This requires interaction with an environment which is orderly and logical.

-The child needs the skills of independence (of being able to do things for him/herself) in order to maximize directing his/her own learning. The child holds within him/her interests and capacities which best directs learning.

The Teacher:

-The teacher's role is one of facilitator and catalyst. He/she is the creator of the learning environment and assists the child in exploring it. He/she is a resource.

-The teacher uses order and structure in the classroom to provide support for growth and development, not to inhibit it. "Rules" are necessary to provide equal opportunities for each child to pursue own interests, for safety, and to develop an awareness of culturally appropriate behavior.

-The teacher uses observations of classroom activity and behavior to determine necessary interaction: in creating an appropriate learning environment and in determining his/her own interactions with the children.

-The teacher and learning environment are secondary to the child. They can encourage and promote learning, they can inhibit learning; but they cannot create what is not within the child's potential.

-Respect and love for the child and his/her inner capacity for growth and development are paramount.

Goals of Education:

-The major heading for "goals of education" is biological and social: The goals are to satisfy both the needs of physical growth and development and the emotional, social, spiritual and intellectual needs of a social and adult human being. More succinctly, the goal of education is that each child develop into a happy, competent, self-fulfilled adult.

-The aim of education "is not merely to make the child understand... but so touch his imagination as to enthuse him to his inmost core."(23)

-The learning environment is designed to answer the needs of this growth and development, not dictate them.

-More specifically, the goals of education require that the child be able to think. This ability to analyse and reason results from an ability to concentrate, observe, discriminate...which comes from muscular and intellectual interaction/exploration in the environment.

-Specific bits of knowledge and the ability to read, write, do do arithmetic, etc. are important by-products of these larger goals. They are points of departure rather than significant goals in themselves.

Miscellaneous notes:

-Internal motivation is the optimal form of motivation.

-The challenge of learning is based on interest and desire for personal satisfaction and excellence which creates an inner drive for knowledge. High self-esteem and the knowledge that one can do and learn just about anything, social cooperation and encouragement are the motivators for learning in the classroom...not competition.

1.4 CRITICISM FOCUSED UPON MONTESSORI:

There are four general areas of criticism that focused upon Maria Montessori. These criticisms are related to the impact Montessori had, as a person, on her system. These are:

1.4.1 Montessori's personal influence
1.4.2 Montessori's method as unscientific
1.4.3 the method as rigid
1.4.4 exaggerated expectations.

I have used this section to provide some background information and perspectives which will be useful when examining criticisms; so, except in an indirect way, I have avoided interjecting any conclusions about the information provided here.

1.4.1 Montessori's Personal Influence as It Related to the Montessori Movement.

Maria Montessori was a charismatic figure. Speaking without notes, Montessori managed to rouse audience after audience. It didn't seem to matter what her topic or concern was. As a feminist representative during the Feminist Congress in Berlin in 1896, Montessori made her first speech, resulting in her picture and story being reproduced in newspapers across Europe. Her tantalyzing messages, as well as her unusual ability to captivate her audiences in her message made headlines everywhere she spoke.(24) Montessori became the reigning matriarch of an educational movement -- an international movement. She loved the attention as well as the protection of her followers. There is little doubt that she was the one in charge, but not necessarily in control of what was being done in her name.

The critics, perhaps resenting her decision to address the public directly, as opposed to the more traditional and acceptable route of introducing new theories through the usual professional settings, made reference to Montessori's personality as being the foundation and necessary support for this amazing spread of Montessori pedagogy throughout the world. The position was that without Montessori's directing hand, the movement would not survive. More to the point, some suggested that without Montessori's presence nothing of value was being offered the field of education. In particular, Boyd, Kilpatrick, Morgan, and Green used these arguments to justify their antagonism.

1.4.2 Montessori's approach as unscientific

Montessori claimed that her pedagogy was valid because it was based upon a system of logical, rational, scientific inquiry.(25) It was a new and better approach because it provided an environment where children could explore freely and spontaneously while continuously providing the observer (the teacher) with feedback about what was interesting and needed.(26) Montessori's critics argued that her system was not scientific at all. Strenuous arguments were presented about the lack of objectivity in choosing materials as well as methods for presentation. R.J. Fynne, for example, felt that Montessori lacked a methodologically consistent system for recording and analyzing her observations. In addition, he was critical of her claims "that her apparatus had been constructed on a basis of exactitude. The tests of exactitude that she accepts are the polarization of the child's attention and his repetition of the actions involved in the use of the apparatus."(27) He noted that these criterion could easily be met without the "educative significance" proposed by Montessori, and that "We must question the value of her two tests."(28) Fynne focused on how "polarization of attention" and "repetition" might be interpreted or misinterpreted. He used this argument as the basis for denying Montessori's scientific inquiry claim. Rather than recognizing that Montessori was saying -- "use the materials that attract a child and hold his attention, and allow him to concentrate and repeat activities that are required for his development," -- Fynne allowed himself to get sidetracked into an argument over something that Montessori never intended. While Montessori was describing the manner in which one can determine the usefulness and desirability of a particular piece of material, Fynne took her point much farther, assuming that that was Montessori's basis for her whole claim to scientific education.

Professor J.A. Green, in a typical comment of critics, contrasted Montessori's "collection of pretty stories" with "any ordinary laboratory record of the study of animal behavior."(29) Fynne, on the otherhand, did credit Montessori with "amazing intuitive and experimental knowledge; here too is a great teacher but," he concluded, "she is not a scientist and does not think or write as one."(30)

Rita Kramer, in her biography of Maria Montessori, concluded in a way aptly representative of the critics that it was true that Montessori "did not provide adequate evidence or proof of her findings, had no control groups, did not provide detailed accounts of her experiments in such a way that they could be replicated ... although she insisted on the scientific basis for her statements, they were largely the result of remarkably intuitive observations integrated with creative genius into a body of thinking about education ... which is not at all the same thing as laboratory science subject to statistical analysis."(31)

I found no evidence that any of Montessori's critics tried to examine how Montessori's questions arose or how her thinking developed. There were numerous suggestions as to the appropriateness of research, but no one seemed intrigued enough to do the research themselves or prove through research that she was wrong.

In contrast to the impression left by the critics and Kramer, Montessori carefully defined her method of scientific inquiry and distinguished it from laboratory analysis.(32) Montessori noted: "It is not my intention to present a treatise on 'Scientific Pedagogy.' The modest design of these incomplete notes is to give the results of an experiment that apparently opens the way for putting into practice those principles of science which in these last years are tending to revolutionize the work of education."(33) Montessori was no doubt guilty of loosely using the word "scientific," in a broader European manner still fashionable, claiming, however, that hers was a method of inquiry "unspoiled by preconceptions,"(34) based upon exactitude, "empirical data, testing and reworking ... her methods ... on the basis of further observations."(35) Accordingly, William Kilpatrick, one of her most vehement critics, appreciated her "scientific attitude" and "true scientific spirit of experimentation" by which Montessori "has devised a practice and an institution."(36)

Montessori considered her scientific contribution to be a process of inquiry, an attitude based upon the observation of real events in the classroom, unencumbered by hypotheses, and open to change when the events warranted it. This was not just true of personal observation; this was to be the guiding principle by which every teacher was to prepare learning environments which would be appropriate for each and every child in the classroom. It was this process of inquiry (experimenting, observing, determining needs, and planning for individual children) to which Montessori constantly referred.(37) Individual intuition and interpretation were necessary to fulfill the requirements of this scientific inquiry.(38) It is here where some of the critics claimed the impossibility of following through with scientific procedures because they rely on the individual capacities of the teachers.

Montessori seemed to feel the need for and recognized the importance of independent collaboration. She wanted others to test her proposals in a controlled manner. Interviewer Sheila Radice noted Montessori's comment in her book, THE NEW CHILDREN: "I don't know what to do ... there is so much (to study) and nobody will ever collaborate ... what I want now is a body of colleagues, research workers, who will examine what I have already done, apply my principles as far as I have gone, not in the spirit of opposition or conviction, but as a matter of experiment. Then they can help me with constructive criticism."(39) Kramer traced several attempts to do this, none of which came to fruition. Montessori's ongoing dream to establish academic investigations of her approach to education never came to be.(40) However, it was a Catch 22. Only someone trained by Montessori, in overall agreement with and comprehension of her basic principles, could conduct such research. Since creativity, flexibility and ingenuity were necessary, the investigation would have been considered biased by scientific standards.

The definition of "scientific" is obviously one of the problems here. Montessori saw her work as scientific because it relied upon an empirical method of inquiry. It was experimental in scope and sought basic truths based upon ongoing data, rather than absolute hypotheses or curricular theories. The critics, on the other hand, focused upon Montessori's failure to establish objective critera for observations and the drawing of conclusions (e.g., for teachers' responses to individual circumstances). The fact that one must rely on the intuitive and subjective capacity and knowledge of individual teachers pointed, as proof of the pudding, to the critics' objection to Montessori's method as being nonscientific.

1.4.3 Montessori's Approach as a Rigid and Fixed Entity

The question of Montessori's rigidity and the resulting dogmatism associated with the application of her ideas was a far-reaching one. It related to Montessori's attempt to control all Montessori teacher training and the distribution of Montessori materials, as well as anyone using her name. It was an unusual situation as it related to the normal free dissemination of new ideas within the educational community. Rita Krammer explained the situation as follows: "With Mario [her son] at her side as her assistant, the activities of the movement became increasingly organized ... both Montessori's were convinced that it was necessary to keep control of the movement in the Dottoressa's hands in order to keep the method from being watered down."(41) [Montessori] "was totally dedicated to the success of her work ... [she] believed that her methods promised a reform of the schools, and through the education of a new kind of child, of society itself. She and her followers sincerely believed that her ideas could be put effectively to use only in the exact way she had evolved them ... it is difficult to gauge the extent to which the institutionalization of Montessori's following served to promote her ideas and the extent to which is served to retard further development."(42) It is intriguing to explore the extent to which Montessori's personal reputation lead to the conclusion that her educational program was rigid. Her critics all claimed her to be quite close-minded and rigid, and her advocates all claimed that she was open-minded and welcomed suggestions. In interviews I conducted with Annie Hermann and Lisl Barnett, both agreed that Montessori left an impression of rigidity throughout the world. They both proposed, however, that the source of that impression came from Montessori's fanatical followers and not from Montessori herself. They suggested that Montessori allowed herself to be surrounded and protected by avid fans and did not fully appreciate the distorted impression they were leaving.(43)*

There are numerous examples which indicate Montessori's concern for avoiding the rigidity involved with a fixed system: Lorene Wills, in her dissertation "Conditions Associated with the Rise and Decline of the Montessori Method," observed: "It can be stated that even her most enthusiastic disciples never actually advocated a blind acceptance of her methods, but invited comparisons and criticisms."(44) June Heinrich, in an article entitled "The Montessori Approach to Education," noted: "As she patiently observed, tried out, tested and re-tested her methods and materials in the laboratory of the classroom, so she would undoubtedly advise the educator of today ... study them open-mindedly ... test their validity in the classroom ... add to them ... improve them."(45) Walter Halsey, in "Evaluation of the Montessori Experiments," noted: "The whole spirit of her contribution to education is out of harmony with a fixed system or dogmatic method."(46)

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*Single quotation marks are used in this paper to indicate interviewee's quotes.

Sheila Radice, in her book THE NEW CHILDREN, stated: "Montessori wants educators to understand that this matter of the development of children's activities has never been fully investigated. She does not dogmatize. She recognizes that the whole question, as regards children is perpetually open. Life is ever new, and no two children are alike. She has invented her system of education ... largely for the sake of securing an atmosphere (of freedom)."(47) Radice went on to say that "nothing annoys her more ... than the unintelligent swallowing of doctrine."(48) Anne George, Montessori's interpretor and translator of her first book, THE MONTESSORI METHOD, wrote in an article, "The Montessori Movement in America," that Montessori endeavored "to make clear the fact that what she gives is a working basis, not a neat, compact, complete machine."(49) A.G. Prakasma wrote in a forward to Maria Montessori's book, WHAT YOU SHOULD KNOW ABOUT YOUR CHILD: "Has

Dr. Montessori got at the basic truths underlying the child's nature, growth, development and functions? Is her method conducive to the shaping of the most efficient, serviceable and happy men and women of the future? Each individual reader must give the verdict after ascertaining whether, according to his or her knowledge, observation and conscience, the relevant facts ... are demonstrably true or not." Prakasma went on to say that the essentials of the Montessori system are independence, self-reliance, discipline and activity and service, happiness in achievement, ... "The reader has to see whether Dr. Montessori interprets Nature correctly and follows Nature's laws. Truth and reality are the tests."(50)

Margaret Naumberg, in an article entitled, "Maria Montessori: Friend of Children," as a student of Montessori's and a Montessori teacher before going on to create her own Walden school system, noted a discussion she'd had with Montessori in which Naumberg had commented upon the special strength required of innovators. "I reminded her of Nietzsche's clear-cut words, that all creators are hard -- hard like the diamond. She smiled and acquiesced at the implication. To be 'hard' she agreed was desirable, but to be hard without rigidity was the goal."(51) This last quote implies some of the difficulties Montessori encountered in her efforts to disseminate her ideas internationally. Her theories were seriously misrepresented and she often felt abused. Lial Barnett noted 'Everyone wanted to take things from her. She'd trust others and be sorely disappointed.'(52) Two important examples relate to the impact Montessori had on American public and professional opinion, instances which helped to convince her that she needed better control over the use of her ideas and those using her name: 1) S.S. McClure, owner and editor of McClure Magazine, was responsibile for a series of articles written by Josephine Tozier and Ellen Yale Stevens(53), whom McClure sent to Rome to investigate Montessori.(54) To simplify a complex story (which is well described in Rita Kramer's biography of Montessori), McClure convinced Montessori to copyright her materials and let him represent her interests in America. After much miscommunication, Montessori was left with the feeling that McClure was getting all the advantages and misusing her. The relationship was terminated but not before American educators were left with the impression that Montessori wanted absolute control.(55) 2) The other example relates to H.W. Holmes, the author of the introduction to the first addition of THE MONTESSORI METHOD. This introduction, by an educator who didn't understand the Montessori premises and principles, was inadequate and seriously misrepresented Montessori. As a result especially of these two experiences, Montessori became convinced that she needed more control over what was being said in her name.(56)

Member of the Montessori Association in America (the Montessori Education Association) were convinced that Montessori was not a good judge of character when it came to recognizing on whom she could rely.(57) Lial Barnett felt that the impressions of rigidity came from the limitations inherent in creating an organization. 'She was overwhelmed by her desire to get her messages across, she wanted to do everything including trying to protect her message from being misunderstood.'(58) Criticisms of rigidity and dogmatism continue to haunt the Montessori movement throughout the world and limit openness to her ideas. The difficulties inherent in the mass dissemination of information is a problem which plagues teacher training programs of all pedagogical theories. The problems related to the matching of personalities of potential teachers with an educational system most appropriate for their style, abilities and viewpoints (so that each teacher is matched with a system that can be used logically and flexibly) would, most likely, improve the quality of all teachers significantly. It seems sadly ironic that Montessori has left such a vast impression of rigidity, and that teachers do use her ideas dogmatically when her intention was to create an approach to education which was always open to new ideas and was always to be flexible to the individual needs and reactions of the children.(59)

The problem and question of rigidity creates real obstacles for us as researchers and interpreters in trying to determine the essence of Montessori's ideas. It's actually much easier to examine a rigid program than a flexible one.

1.4.4 Exaggerated Expectations

Several critics claimed that Montessori wrote only of the perfect learning environment, the ideal teacher, and the wonderful children's responses, without providing realistic pictures of what one would actually encounter in the classroom.(60) Green complained that Montessori's writings were "shallow and disappointing, because (they) give no account of the failures or the difficulties of the system."(61) Maria Mills, one of Montessori's protoges felt that Montessori couldn't fully appreciate the normal problems which teachers encountered because Montessori's presence so greatly affected the children that when she entered the classroom, there simply were no problems.(62) In contrast, another teacher described Montessori's helpful suggestions and efforts to provide alternatives for individual problems.(63) Lial Barnett felt that Montessori recognized problems and discussed them openly with teachers, but the intuition required to respond to individual situations simply couldn't be transmitted on paper. She noted it would be impossible to include or even conceive of all the limiting circumstances which would make specific suggestions good or bad. Barnett concluded that Montessori just couldn't do it all: she was overwhelmed by her task of disseminating those essential ideas which she felt were unique to her new approach to education.(64) It is true that Montessori's style of writing, which was typical of her background and era --flowery and effusive--was particularly hard for Americans to appreciate.(65)

The question of whether Montessori's examples written in her books were true, composites, or ideals, is simply impossible to discern; but the number of times her advocates repeat similar situations (specifically the examples of particular situations observed by Jessie White in MONTESSORI SCHOOLS AS SEEN IN THE EARLY SUMMER OF 1913, by Sheila Radice in THE NEW CHILDREN, and by Carolyne Bailey in MONTESSORI CHILDREN), are representative of numerous examples in articles written by journalists in newspapers and magazines throughout the world. This suggests something more than a creative imagination. Perhaps her critics were unable accurately to evaluate what kinds of behaviors children would elicit within the classroom because the kind of teaching the critics promoted tended not to permit a teacher the means to observe those sorts of behaviors.

1.5 Conclusions

The critical points raised in this section were made on several levels. How they related to the usefulness of Montessori's approach is not entirely clear. It is possible that critics attack the person when their criticisms of ideas are weak in order, perhaps, to overshadow their failure to detail true criticisms. The educator's criteria for proving the validity of Montessori's theories, moreover, did not seem to be directed toward other systems of education ... certainly not toward their own. Perhaps there was resentment toward an Italian female who was receiving international attention. Certainly there was antagonism toward Italy following WWI. It may have been the unorthodox manner in which Montessori addressed the public rather than going the professional-journal, university-appointment route. The impression left by Montessori and her "followers" was that of a crusade. While Montessori claimed to be open to constructive criticism, her later years were spent in controlling almost every aspect of the implementation of her discoveries. By the end of the 1920's, according to Rita Kramer, Montessori (or perhaps Montessori's followers) was closing off her avenues and seemed to be isolating her ideas from new realms of information. Whether this was something she was directing personally or not, it seems that it was not the impression she wanted to provide to the world; but, it may have been the only way she felt she could continue to concentrate on the dissemination of her ideas. In her introduction to the new translation of THE MONTESSORI METHOD called THE DISCOVERY OF THE CHILD (1948), Montessori made note of the many advances which had occured since the first edition. She pointed to some of the errors in her original book which had come to light as a result of this more recent information. But she begged off a complete revision as being beyond her circumstances.(66)

[Montessori was 78 years old at this time, still traveling lecturing, observing, writing...focusing her energies on infant development and education for secondary-aged students.]

Critics seemed to use arguments against Montessori, the person, to deny the validity of Montessori, the educational approach. And Maria Montessori gave them much fuel for fire. Through her disassociation with universities to insure personal freedom, she became dependent upon the fees which came in from her training courses, book rights, lectures, and copyrighted materials. According to Kramer this lent a commercial aspect to her activities and "contributed to maintaining her work as a separate movement outside the mainstream of educational thought."(67) Mother Isabel, a woman trained by Montessori in London and who became one of the Association Montessori Internationale (A.M.I.) teacher trainers, noted that Montessori was a vain woman. She loved the attention which her followers provided and appreciated the protection which they offered her.(68)

During these years of intense criticism, primarily from North America, a number of other factors may have had some impact on Montessori's desire or ability to address her critics. First, she had an illegitimate son whom she had to leave with another family and keep a secret in order to pursue her research. Secondly, Mussolini was trying to dictate Montessori's activities and publicity in Europe before World War II. She seems to have put a great deal of energy into limiting his influence. And third, Montessori did not share a common language with any of these major critics which would have enabled her to fully communicate with them. In any case, the understanding that

Maria Montessori was indeed a real human being with human frailties and limitations should not side-track us from the purpose of this paper, which is to explore the criticisms of Montessori's discoveries, basic principles, and contributions.

2.0 APPROACHES IN THE CLASSROOM ("METHODS"):

In this section I will examine the arguments and criticisms which focused upon the actual classroom environment and materials. Montessori would insist that she had not created a "method." As I noted earlier, Americans get this impression from a publisher's decision to change titles when translating her Italian edition in English: her original book from SCIENTIFIC PEDAGOGY AS APPLIED TO THE EDUCATION OF INFANTS became THE MONTESSORI METHOD. Though Montessori denied the need for any absolute set of materials or apparatus in a particular prepared environment, a Montessori classroom has come to be recognized as one which includes a fairly standard collection of Montessori materials. I have categorized the criticisms focused on classroom environment into nine specific categories:

2.1 The Didactic Materials
2.2 Play Materials
2.3 Use of Dramatic Arts
2.4 Lack of Humanities Exercises
2.5 Limited "Creative Arts" Opportunities
2.6 Reading and Writing

2.1 The Didactic Materials

The methodological use of the didactic materials received the most vehement criticisms from educators, so I have further broken this category into six basic arguments:

2.1.1 the materials as limited
2.1.2 question of artificiality, formality
2.1.3 question of inflexibility
2.1.4 the high cost of materials

2.1.1 the materials as limited

Many critics were alarmed by the implementation of the Montessori didactic materials. Some educators found the materials limited and limiting. The Gesells complained, in their chapter "Montessori Kindergarten," from their book THE NORMAL CHILD AND PRIMARY EDUCATION: "The moment that one reduces any philosophy of education to concrete graduated materials, it loses the unity and vital impulse which created it."(69) Related to this was William Stern's comment in his book on PSYCHOLOGY OF EARLY CHILDHOOD UP TO THE SIXTH YEAR OF AGE, where he made clear an opposition to the didactic materials. He felt it was a mistake to make the didactic materials the "chief aim and object of early activity."(70) Fynne stated that Montessori "is most certainly not justified in her attempt to establish a rigid and narrow orthodoxy in the matter of apparatus."(71) Fynne went on to say that Montessori provided "too little scope for those intelligent children who desired to explore and who seek to discover the hidden possibilities of manipulative materials."(72) Kilpatrick claimed that the "Montessori school apparatus affords but meager diet for normally active children."(73) He also noted that the material "affords singularly little variety ... it presents a limited series of exactly distinct and very precise activities."(74) John Dewey in his book SCHOOLS OF TOMORROW saw "a good deal of effort to control the growth of the mind by the material presented."(75) Critical educators knew that Montessori put a lot of emphasis on the didactic materials. They seemed to have concluded that she, therefore, felt it was the mainstay of the classroom. Kilpatrick claimed, "so narrow and limited a range of activity cannot go far in satisfying the normal child."(76)

As a critical part of the structural foundation for everything which was to follow developmentally, Montessori placed heavy emphasis on the need for and the use of didactic materials. She felt that the materials offered basic sensorial and discriminatory experiences necessary for all later work. Each piece of apparatus offered very specific experiences which, when combined with the rest of the classroom activities, satisfied basic developmental needs of all children.(77) Dewey recognized some of this when he stated, "the object is ... to exercise powers that the child is using constantly in all his daily actions so that he may have a more and more accurate skill control over them."(78) Lili Roubiczek Peller(79), who knew Maria Montessori's work at close hand in her own Montessori school in Vienna, explained it in this way: "The Montessori material is often not understood because it is compared with other didactic material. It ought to be considered as merely the complement of a richly varied environment."(80) Mario Montessori (Maria's son) and Claude Clairmont, in their article "Montessori and the Deeper Freedom" in THE YEARBOOK OF EDUCATION (London) agreed with this: "It is not as if the presence of the color-spools limited the child's experience in other directions. The Montessori child sees flowers in the garden, like anyone else. He is as free to draw and paint as any child in the 'free activity' class. But he has an added richness -- one supplied to him because of his delight in it: and if we are really sincere in our wish to serve his freedom, we have no alternative but to supply it and ... to defend it."(81) Ellen Yale Stevens noted: "We must remember that Dr. Montessori considers the materials she has invented a necessary minimum only, for education, and we may therefore feel free to elaborate and expand as conditions and experience dictate, provided always that we keep clearly in mind the principles which should guide us."(82) Sheila Radice concurred: "Dr. Montessori is often asked if this material is sufficient for the needs of the growing child. 'No,' she says. 'It is not sufficient. I have given by means of it those things that were the most difficult to establish. Many more things can enter into the scope of the child, and many more things should and must enter.'"(83) Montessori warned of confusing and cluttering the classroom, as well as the mind of the child. She felt that the materials she had compiled met the requirements of most children.(84) Stevens felt that American educators had a false sense of the limits of the materials in a Montessori classroom because, "The material as it is sold in this country gives no hint of the opportunity for free play, of free design, and of manual and nature work that the system provides for."(85) Rita Kramer concluded, "while it is hard to take seriously today, some purists' insistence on the necessity of using the identical materials in exactly the same way Montessori used them in 1907, what is impressive is how these materials have stood the test of time. By-in-large, the skills they develop, and their progression from the simple to the complex, meet the needs of children just as they did in the first Casa dei Bambini."(86)

The critics seemed to have defined the role and created a position of prominence for the didactic materials not intended by Montessori. I wonder if this was because the materials themselves offered the most obvious and concrete aspects of a very complex program and they were the easiest to criticize. Also, the Montessori materials are extremely attractive and impressive, and perhaps this created antagonism for those educators who felt they were in competition with her. Further theoretical discussion concerning the use and need for these didactic materials are explored in Section 3.0 (specifically, 3.1.4 and 3.2.7).

2.1.2 questions of artificiality and formality

A second major criticism surrounding the use of didactic materials was that the materials themselves were artificial, formal, not found in the "real environment" and, therefore, could have no real inherent interest. In particular, the criticism was that the materials offered activities which were remote from social activities.(87) W.H. Holmes stated that "the spiritual or personal side of the Montessori material is almost Nil. This would not be so if the sense exercises were a little more closely connected with real life, as they would be provided dolls were used for teaching the practical exercises in place of the rather unattractive frames of the Montessori apparatus."(88) The progressive schools, oriented around Dewey's and Kilpatrick's theories, and the traditional kindergarten classes based on Froebel's ideas emphasized the organization of all curriculum around the social needs and interests of the classroom group as a whole. Advocates of neither felt comfortable isolating the learning of specific experiences through specific materials because it denied the group the opportunity to have mutual experiences and was too formal.

We get a different perspective from those approving of Montessori's materials. Critics completely neglected Montessori's age-references for different materials. Most of the critics were addressing the needs of the five to six year-old kindergarten child. Montessori's didactic materials were designed to meet the needs of the two to four year-old, whose needs for social activities were vastly different from the older child.(89) Far from being of no interest to the younger child, Montessori found younger children were totally engrossed when the materials were designed in such a way as to minimize confusion, provide systematic, precise relationship(90), and related the child's level of development.(91) Dewey admitted the value of Montessori's apparatus for meeting the needs and interests of the two to four year-olds.(92)

In response to the general comments of critics that the materials were "too limited," Rusk noted: "One has only to compare the full range of the Montessori apparatus with such apparatus as is available to the child in the traditional infant room to recognize the superiority of the Montessori apparatus."(93) Rusk also questioned the automatic assumption on the part of the Frobelians and Progressives "that social activites of a complicated nature are the only exercises adapted to the child."(94) The antagonism felt toward "formal" materials implied an assumption that "formal" materials, meaning "structured" and "organized," would inhibit "informal" experiences, and that they could not, therefore, satisfy the needs of the normal child.(95) MontessoriO did not find this to be true at all. In fact, the reactions of the children were the bases for determining the merit of the materials.(96) Critics felt that the essential features of the environment which the child might need to experience were found in the "natural" surroundings of a normal school and home-play environment.(97) Montessori found that the young child of two to four years was far more interested and far less likely to become confused when the materials were presented in an orderly and consistent fashion. She found that the five to six year-olds used these materials in a much more sophisticated way because of their earlier experiences.(98) The didactic materials, as was noted before, were "in addition to" not "instead of" the materials and opportunities found in nature.

2.1.3 question of inflexibility

Related to the above questions were the criticisms that the didactic materials were inflexible, required "correct use" and inhibited "creativity." These criticisms were based upon the impression that Montessori directed rigid presentation and use of the materials. Some critics felt that Montessori had created an absolute set of materials which were to be used in a dogmatically rigid way.

Kilpatrick noted the obvious contradiction between Montessori's "liberty principles" and his impression that the apparatus required "mechanical manipulation"; and that "the didactic apparatus is in intention so devised so that with each piece one, and only one, line of activity is feasible."(99) Florence Ward found that "The presentation consisted in doing (and saying) just the one or two things for which the materials was designed."(100) Green described the use of the cylinder blocks to represents soldiers and trenches as a "kind of escape from the prison-house of didactic materials" of which "there is never a word."(101)

But even the Gesells noticed that Montessori "does not approve a wooden use of the ... material ... that she imposed no arbitrary sequence of tasks or plays from without."(102) Lili Roubiczek Peller noted that the didactic material "ought to be considered as merely the complement of a richly varied environment, as supplying guiding motifs by which the creative activity and life of children learns how to function."(103) Barnett explained, 'Each piece of sensorial material was especially designed to impart a special feature...but this should be taken in a broad sense...this does not mean that the child has only one way of doing the material...'(104) 'It is true that the pink tower cubes were not to be used for throwing into the air, balls were available for that; they were to be used as they were intended because they were carefully designed to impart a particular experience and opportunity for exploration.'(105) But, there is a challenging and essential counterpart to this directive: a child engaged in purposeful activity was never interrupted.(106) Barnett concluded: 'Human understanding always comes first ...a teacher must be sensitive and knowledgeable about the needs of a particular child and always observe carefully to know what is needed.'(107) Montessori's environment was to be an environment rich in all sorts of materials. The didactic materials were to be only one part of this. Far from denying the child an opportunity to explore and experiment, these materials offered very special and particular directions for exploration and experimentation. The didactic materials were "extra," not instead of the traditional toys and blocks which allowed for the role-playing and "creative use" for which the critics cried out. I will discuss these traditional toys and "play" materials in Section 2.2, and will explore more thoroughly the theory behind the didactic materials in Section 3.2.7.

2.1.4 high cost of Montessori materials

W.A. Baldwin, in an article entitled "The Conflicting Pedagogy of Madare Montessori," represented a number of educators when he complained that the Montessori materials did not justify their expense.(108) He felt that they were also artificial and not designed for children.(109) On the other hand, Radice noted: "if material cannot be bought, the teachers can make something to go on with...the amenities of life can follow as means permit."(110) Because educators such as Morgan, Baldwin, and Kilpatrick failed to understand the purpose of these materials, particularly the didactic materials, these educators' estimations of the materials' value have no meaning. Margo Waltuch, in response to my interview question as to the valuing of materials, threw up her hands and reversed the question: "How could these educators know? They didn't try using the materials as they were designed, if at all."(111) In fact, supplying a Montessori classroom is no more expensive than supplying a traditional classroom. Though the start-up costs are higher, the materials are longer lasting and there are fewer disposable items such as workbooks and textbooks. The costs even out by the third year and are less in a Montessori classroom than in a traditional one after that. Once again, there was no appreciation or recognition of the quality of materials designed to last years and years rather than months.

2.2 Play Materials

Many assumptions were made concerning Montessori's attitudes about toys, crude materials, and "play activities." The actual use of toys, food, and other "unorganized" play materials was frequently thought to be unacceptable to Montessori [Boyd (112), Kilpatrick (113), Dewey (114)]. The most representative criticism of this confused issue epitomizing the confusion which came from a too literal translation and out-of-context interpretation of a particular aspect of Montessori's writings, with no overall view or awareness of the practical application, came from William Boyd: "The joyous play of the child makes no appeal to [Montessori]. His toys are 'foolish and degrading'; his games are 'meaningless' and 'void of thought'; the stories commonly told to him are 'silly.' Montessori's ideal child never plays."(115) Waltuch offered an important perspective here: 'Montessori didn't have any set ideas about what the child needed -- she offered toys commonly provided by parents and educators and discovered that the children soon tired of these particular toys; whereas other materials challenged, stimulated, and interested the child. Toys are a pastime, the materials in the classroom absorb the child.'(116) The questions should be concerned not with whether "play" materials are to be available, but what kind, and under what situations they were to be provided. Montessori did not say that all toys were foolish or that all games were meaningless. She was denouncing specific toys which were foolish and meaningless [which happened to include the vast majority of the materials she found available to the young child]. Once again, the critics seem too eager to grab upon a particular comment without regard for context or intended meaning.

The perspectives offered by Montessori's proponents were, of course, totally different. Stevens wrote: "Since my return from Italy I have heard the statement often made that Dr. Montessori does not believe in play. Like many other criticisms this has arisen from a misapprehension, this time of her allusion to 'foolish and degrading toys,' (MONTESSORI METHOD, p.372) a phrase which has been wrested from its connection and misapplied. Dr. Montessori believes that a child is in earnest in his play and loves to give it meaning. She encourages free play therefore as a part of the child's motor training and suggests many of Froebel's games with songs, and approves of balls, kites, hoops, bean bags, games of tag or 'Puss in the corner.' All these are active, all develop the children physically and exercise their intelligence while they are at the same time expressing their spontaneous choice. She directs her sarcasm against such mechanical toys as are always to be found in our shops which afford no opportunity for the child to show his constructive ability."(117, please note that Stevens' page reference is for the 1912 translation)

Lisl Barnett explained: 'Of course there should be sand play, and water play, and dolls, and whatever the financial situation of the school could afford. The garden was the place where all of these items existed because it was simply not possible for one child to carefully concentrate on making a tower or grading sounds boxes, while other children were knocking over blocks right next to them. And each child had free choice when he desired use of which materials.'(118) This statement by Lisl Barnett points out a major oversight made by many Montessori teachers in this country: that the prepared environment was to include an outdoor garden area with less "organized" materials than would be found within the indoor classroom. These materials would include all those which did not require as much control of movement and concentration as some of the more precisely designed Montessori apparatus. The impracticality of an open garden area because of climate, space limitations or climate led to its demise in all but a handful of Montessori schools in America. Unfortunately, many of the activities which existed in the outdoor environment were, therefore, totally disregarded. Thus, we find Montessori classrooms without easels, blocks, sand and water play, etc. because of the difficulty of incorporating these activities side by side with the activities which challenge the child to more concentrated exploration. It's not necessarily that Montessori teachers saw no value in these activities; rather, the absence of such activities reflects a variety of attitudes including a prioritization of available time and space.

The element of time is an important consideration to explore, briefly. Montessori wrote of what was to be provided for the children in an all-day program where most of the children spent 70-80% of their waking hours getting to and from and attending the Montessori classroom. Most American Montessori school programs are three-to-five hours per day; three hours per day being the norm for two to four and one-half year-olds. What can and should be available during these much more limited hours represents a major difference between Montessori and traditional preschool programs. But even among Montessorians differences of opinion exist. The Association Montessori Internationale (A.M.I.) attitude is that the short program is most valuable if it is not watered down with activities to which the child will have access during other periods of the day, at home or in other child-care facilities. The American Montessori Society believes a balance between the A.M.I. classroom and the traditional nursery school program is most valuable to the child. Adequate examination of these differences of opinion cannot be explored here. It is important to note that each Montessori teacher must decide for him/herself where along the continuum of all-Montessori determined materials vs. no Montessori materials he/she fits. One will typically find more dolls, dress-up materials, blocks, sand and water play in the American Montessori affiliated schools then in the A.M.I. schools, but easels and other arts and crafts activities are usually found in both.

Emma Plank made an important comment about the use of dolls in the classroom, noting a decision to exclude dolls from the classroom in Vienna because dolls were a very special and private possession, not one to be easily shared by a community of children.(119) Dolls were found in other Montessori environments however. Carolyne Bailey described the "little salon" where all the necessary ingredients for "playing house" were available in the schools in which she observed.(120) "These toys [dolls, tea sets large enough to be functional, sinks, beds, blocks, toy animals, cabinets...all modeled from real life...] Dr. Montessori urges us to use [realizing] that the child's deepest impulse is to dramatize..."(121)

It should be noted that Montessori's experiments in the classroom began with the normal compliment of toys. She was most astounded, at first, to observe that after a short period of interest in the traditional toys, the children lost interest in them and spent their time with the didactic and practical life materials. Far from having an absolute attitude about toys, Montessori let the children show her what they needed. She drew some general conclusions from these observations. [The use of traditional toys is advocated for the very beginning of each school year to help familiarize the children with the structure and routine of the classroom with comfortable, familiar materials until their muscular and mental control are suffiently developed for the Montessori materials. As the children lose interest and move into the rest of the prepared environment, these items are packed away.] The experiment is an on-going one. Those items which hold the children's interest remain in the classroom.

2.3 Use of Dramatic Arts

William Boyd proclaimed that "One of the most unsatisfactory features of the Montessori system is the complete absence of all the subjects which make a direct aesthetic and moral appeal to the child. The pupils in the Children's Houses do not recite poetry or sing songs or dance. Stories are never told to them and no opportunity is given to them for dramatic action."(122) Boyd felt that Montessori considered the dramatic arts as offering little in the way of mental development.(123) H.W. Holmes realized that Montessori did not "wholly exclude imaginative games" but felt she did not appreciate the American kindergarten's remarkable use of worthwhile stories.(124) R.R. Reeder, in an article entitled "Montessori Method of Educating Young Children" stated, "stories, songs, and social games are staples of the kindergarten. These are apparently not significant factors in Montessori's system."(125)

The critics are certainly justified in claiming that the dramatic arts activities do not receive the same prominence in the Montessori classroom as they do in a traditional one. That doesn't necessarily mean that each individual child is less involved in such activities; it does mean that each child determines a personal level of involvement rather than its being automatically determined for the child as a member of the class being moved along through group group activities. In my telephone interview with Emma Plank, she commented: 'I don't know where anyone got the idea that Montessori didn't believe in stories. Of course she did! They were an invaluable part of every classroom.'(125a) Once again the focus was different from the traditional classroom and the critics confused Montessori's real message: that of how, what, and when specific kinds of stories were of value.

These critics have fallen into the same trap before: trying to compare and contrast particular parts or quotes of Montessori with particular parts of other educational systems without mediating criteria. Montessori's approach, as noted in the Introduction, was an integrated program whereas the traditional program was a segmented one. Simply comparing the story-reading aspects of one with the fact that story-reading does not exist on that same level in another falls far short of appropriate criticism. In the case of dramatic arts, Montessori was denouncing the use of "foolish stories," not claiming that all stories were useless. Montessori found that the Montessori environment, which integrated all sorts of dramatic options, story-telling, etc. during the normal course of the day, tended to satisfy those needs without requiring the traditional "class-sit-down-together, do-it-all-together" routine.(126) Radice explained that Montessori did not feel the need to dwell on descriptions of singing, dancing, story-telling, etc. because it never occured to her that anyone could conceive of early childhood education without them.(127) Fynne noted, specifically that Boyd's criticism of Montessori's exclusion of rhythm, for instance, was based on a different frame of reference; that Boyd wanted rhythm training to be a separate feature while Montessori included it within her exercises for gross muscular development.(128)

Theodate Smith, in his book THE MONTESSORI SYSTEM IN THEORY AND PRACTICE, referred throughout his book to the "lessons" as "plays" because of the natural drama involved in the experiences of every single exercise.(129) Instead of needing to create role-playing and play-acting opportunities, the classroom was designed to provide real-life opportunities. The question the critics should have been concerned about was how much of a need for play-acting or role-playing there is when a child's need for real activities is satisfied. This will be explored further in Section 3.1.1, 3.1.2 and 3.2. Far from lacking dramatic arts, Montessori's environment provided for them in a very integrated, natural and individualised manner.

2.4 Lack of Humanities Exercises

There was also concern that Montessori failed to include the humanities in her learning environment. The most extreme statement came from William Boyd, who stated, "Montessori's failure to do justice to the humanistic subjects is ... deeply rooted both in her temperment and in her psychology ... her thought seems to be closely confined to her medical and scientific concerns. There are no signs of appreciation of art in any form, and only a very partial indication of literary interest."(130) Even David Elkind wondered why Montessori "eschews the aesthetic, the personal, and artistic side of children and of children's play."(131)

Let me juxtapose these statements with some of Montessori's proponents' responses. As Lisl Barnett noted: 'Of course she included the humanities in her classes ... the teacher training and her writings just could not include it all ... and she did not herself develop special materials for each area of the humanities. She was not providing anything new ... not because of a lack of interest but because she simply could not do it all ... she got Anna Maccheroni to develop bell materials and myself to develop a music program ... she accepted all good ideas and encouraged all of us to develop whatever our expertise allowed us to develop ... and then she asked us to share our ideas during her training programs.'(132) Emma Plank noted in a telephone interview in reference to this question of denying the artistic needs of the child, that Montessori didn't feel she was competent in teaching the aesthetic arts, so she brought in experts for the teaching of these areas. Mrs. Plank explained: 'Of course art was needed and vital to allow the children to draw out and explore their fantasies and conflicts as well as to explore their own creativity.'(133) Sheila Radice noted, "In Barcelona she has specialists from outside to teach their own subjects ... singing masters, dancing masters, and drawing masters... she does not dwell on these points in her lectures because she does not conceive of a system of education without them."(134)

On another level, Montessori's concept of how to integrate the humanities differed greatly with those of her American critics. It was not a question of humanities or not, but of how they were to be addressed within the learning environment. The humanities were a vital part of one's culture and, therefore, deserved an appropriate position within the classroom; they were not an isolated aspect but an essential part. Radice compared Montessori's conception of integrating the arts with the traditional attitudes by giving an example: "Music, by the old standards, was an aid to religion, a recreation, sometimes only a mathematical game. By the new [Montessori] standards, it is a means of expression, a means of communication...her whole conception of human development [is tied to these activities] from the simple concrete baby-beginnings ... up to the highest known synthesis."(135) Radice went on to note that Montessori didn't confuse things like counting objects with the real experience of rhythm or music.(136) Montessori wrote of distinguishing the developmental skills such as color discrimination, learning control of a paintbrush, etc. from, for instance, the appreciation of fine art.(137) Montessori used the arts as a vital, ever-present ingredient that "infiltrated" the class just as it does mankind. She appreciated its indispensible position in a prepared learning environment on that basis.

The critics were correct when they claimed there tended to be no "sit-down" lessons in the humanities for the young child (two to four years old). The preschool child needed the basics first, but this did not deny the higher aim. Radice wrote, "Each impulse of the child is translated into action by means of the material, and, working itself out in repeated spontaneous exercises, trains aptitudes which will combine with other aptitudes to form new activities later on till finally we come to the highest and most complex human activities -- literature, art, craft, science, music, drama. It is all a web of phenomena."(138) More simply related by Barnett, 'Humanities, of course but the foundation must be laid ... appreciation of art cannot come before a child can sense colors. Simply knowing the names of colors does not offer the appreciation of art, but is a basic ingredient which itself requires more basic skills of color descrimination and recognition. Appreciation for music cannot come before a child has experienced and can recognise a note, rhythm, has discrimination skills, and concentration.'(139) There is much room for debate as to what are the necessary ingredients for the young child in order to encourage an appreciation for and skills in the humanities. Unfortunately, the critics did not address these issues. I found only the inaccurate assumption that Montessori denied the aesthetic arts completely.

2.5 Limited "Creative Arts" Opportunities

Whereas the critics claimed Montessori neglected the "creative arts," Montessori and her proponents claimed that these were, in fact, "constructive arts," not necessarily directly related to true creativity at all, but still quite appropriate within the Montessori environment. The theoretical exploration of the distinction between Montessori's and her critics' definitions of creativity is explored in Section 3.1.7 and 3.2.5. Suffice it to say here that Montessori did not feel that the traditional teacher-directed "constructive arts" encouraged individual creative activity at all. Montessori had a more broadly integrated interpretation of the word "creative" than her critics appeared to have. Her meaning fit in with her concepts of intelligence, the nature of rational thinking, freedom and independence.(140) The fact that none of her critics recognized the extent of her theories explains both why her ideas about why "creativity" and "creative activity" were rarely understood and why so much criticism surrounded her claims.

Of the absence of particular "constructive art" (arts and crafts) activities several comments should be made: (a) selection of "constructive arts" materials was intended to be available at any one particular time; these would be exchanged for others during the course of the years so a classroom observor would not necessarily get a good perspective on what was available to the child during the course of a complete school year, [This is true to an even greater extent in a traditional preschool program because the curriculum relies far more on teacher-directed and determined activities.] (b) Montessori did not write extensively of what to offer in "arts and crafts" because she had no original ideas about "constructive art." Montessori's emphasis was on how to present them as opposed to "what to present." Many of her followers as well as her critics have misunderstood this.(141) Some Montessori teachers have rigidly limited themselves to literal adoption of "the Montessori materials" excluding activities which were not specifically outlined. It is in these Montessori classrooms where the "constructive arts" opportunities are limited.

2.6 Reading and Writing

A great deal of criticism was directed toward the teaching of reading and writing in the pre-school classroom. Many educators, including Holmes, Kilpatrick and Morgan, protested that Montessori was teaching the academic subjects too early.(142) Green critically noted that Montessori did not apply the freedom principle to "the preparatory muscular and visual analyses."(143) Rusk provided the most representative response to these criticisms: "It can be retorted that [formal school subjects such as writing, reading, counting] came in the development of the Montessori method unsought, and emerged as being for Montessori herself a psychological discovery."(144) Since each child chooses in which activity he is to engage himself, there seems to be no contradiction in the freedom principle.(145) This will be examined in more detail in the theory section on freedom 3.2.3. Montessori made the materials in the environment enticing so that it would be unnecessary to force a child to do any particular exercise. Investigator Ward found the Montessori environment "makes use of a vital source of information the tactile, muscular, sensory activity, that both [reading and writing] are acquired early and with an ease and speed that eliminate all drudgery, and in an atmosphere so splendidly free."(146)

Stern, normally a critic of Montessori, had to admit that Montessori had "succeeded along these experimental paths in perfecting certain accomplishments -- such as writing or calculating, in children of no more than average powers long before the usual school age."(147) Radice noted that the "phenomenon of 'early writing'" was an objection only because proper research as to the normal occurence for writing had not yet been done by anyone other than Montessori.(148) W.H. Holmes, usually critical of Montessori, countered with: "The most important contribution that Montessori has made to education is her method of teaching little children to develop the pen-holding muscles of the hand preparatory to learning to write."(149) This "pen-holding" capacity is now called fine motor development and is recognized as the control needed for a wide range of academic, creative and other physical activities.

Kilpatrick expressed concern that the teaching of academic subjects "tends to divert the attention of parent, teacher, and child from other ... possibly more valuable parts of education."(150) But Boyd provided a slanted yet perceptive and accurate response to this concern: "Dr. Montessori ... does not attach as much importance to writing and reading as many of the readers of her book ... for her part, she regards the literary arts as a by-product of her method rather than as one of its substantial results."(151)

Montessori's observations brought her to the discovery that children tended to learn to write and read easily and naturally when muscularly and intellectually prepared for it.(152) Everything in the classroom was so integrally designed that each and every exercise offered some bit of indirect or direct preparation for reading, writing, and number concepts. For example, from the most basic pouring and spooning exercises to the most complex math abstractions, the exercises were done from left to right, top to bottom ...

Kilpatrick was among several educators who raised doubts about the possibility of utilizing Montessori's phonetic method for teaching reading because the "unphonetic character of the English language would present formidable difficulties."(153) A journalist complained that Montessori failed to appreciate that different children required different methods.(154) It was, in fact, necessary for Montessori to design additional exercises for the teaching of reading in English because of our numerous ruled exceptions and this Montessori did.(155) However, most of the "exceptions" follow rules which can be categorized and provided for within a set of materials, so the basic design of Montessori's language materials was solid. Particular additions were necessary. Even before she did this, however, Professor Ward from Iowa State Teacher's College directed an experiment "following Montessori's guidelines in preparation for writing." She noted a few pertinent conclusions: "The children learned the names of the letters and how to write them in a short time. There was no element of drudgery ... the arm movement came easily and naturally and finger-writing was not called into use ... added interest and attention were given to the written forms of words ... the work was in no way forced; on the contrary, was a continual source of interest and pleasure ... children of their own accord used the colored crayons to write the words they knew ... the writing was legible from the first."(156) In addition, it should be noted that Montessori's language program never solely relied on the phonetic method to teach reading. She recognized the importance of combining phonetic exercises with sight reading and knowledge of the alphabet. But phonics came first to lay the foundation.

The Gesells seemed to feel that Montessori did not appreciate the important distinction between mechanical and intellectual skills, and that Montessori failed to wait for the child's own interest.(157) An adequate response to the latter part of this problem has already been noted: the free choice of the Montessori environment precluded this concern. There is no justification for the first part of this statement: Montessori was quite explicit about separating the technical, mechanical, developmental skills from the intellectual, expressive skills.(158) In fact, she discovered that when the muscular preparations for reading and writing were made available to the child, writing almost always occurred first, because it required only mechanical skills initially while reading required more abstract congnitive abilities.(159)

3.0 THEORETICAL CONCEPTS:

Examining the criticisms directed toward Montessori's theory and philosophy requires a different structure of presentation. This is particularly necessary in that the critics tended to focus on particular parts of the Montessori classroom, and to respond to those criticisms fully it would be necessary to provide insight on dozens of aspects of Montessori theory as they relate to particular aspects of the learning process or environment. Rather than attempt to do that point by point, thus having to repeat those points each time a new criticism comes up, I have organized this chapter by first delineating the criticisms made by her interpreters according to category (3.1); then I have described Montessori's theory in as complete a form as is possible in a relatively short amount of space, realizing that there is no wholly adequate way of doing this. Some sections follow which do deal with some of the points raised in criticisms not readily resolved by my overall explanation of theory. There may still be a sensation of unresolved questions as one reads through the points in "3.1 Criticisms." These will be dealt with in a more complete fashion in "3.2 Montessori Theory."

3.1 The Criticisms

Again, I have organized the criticisms according to category:

3.1.1 Work/Play
3.1.2 Social Development, Individual Work Emphasis vs. Group Instruction
3.1.3 Freedom
3.1.4 Sensorial Materials (Didactic)
3.1.5 Correction of Errors
3.1.6 Problem-Solving Opportunities
3.1.7 Creativity

3.1.1 Work/Play

Almost without exception, those interpreters who became critics noted great concern regarding Montessori's attitude about play in the classroom. Most feared that Montessori was denying the child opportunity to play out fears, fantasies, and the like. The idea that Montessori was forcing children to work was in extreme contrast to the American progressive school of thought at the turn of the century. Educators in the United States were promoting play on any and every level. William Boyd claimed: "The joyous play of the child makes no appeal to her. His toys are 'foolish and degrading'; his games are 'meaningless' and 'void of thought'; the stories commonly told to him are 'silly.' Montessori's ideal child never plays -- except at her games; and then he is eager for knowledge ...."(160)

Some of the criticism was directed toward the didactic materials and the denial of opportunities for free play. Morgan complained, "it must be evident that the didactic exercise with its finely analyzed simple and fixed process will not afford any scope for the free play of imitation and suggestion; nor does it appear that the rigid exercises of practical life will afford any better opportunity."(161) Kilpatrick claimed: "The Montessori school apparatus affords but meager diet for normally active children. Further, while happy childhood knows no stronger nor more fruitful impulse than imaginative and constructive play, still, in these schools PLAYING with the didactic apparatus with the didactic materials is strictly forbidden, and usually no other play materials is furnished. Madame Montessori has, in fact, been publicly quoted as saying 'If I were persuaded that children needed to play, I would provide the proper apparatus; but I am not so persuaded.' The best current thought and practice in America would make constructive and imitative play, socially conditioned, the foundation and principle constituent of the program for children of the kindergarten age, but Madame Montessori rejects it."(162)

Jenny Merrill, an interpreter of Montessori who appreciated many of the aspects of the Montessori classroom, noted: "In clay modeling, for instance, one should emphasize expression, not the product. The making of vases in the Montessori class is more like 'useful work' than the 'play-spirit' of the kindergarten." Merrill, who was an American supervisor of kindergartens, went on to say: "We fear she is getting too near child labor."(163) Robert Rusk, in his book A HISTORY OF INFANT EDUCATION, quoted a Russian philosopher Sergius Hessen cited by K. Gerhards, in a work entitled ZURBEURTEILUNG DER MONTESSORI-PEDAGO, (Leipzig, Quelle and Meyer, 1928). Hessen claimed that Montessori appreciated "'the psychological function' of play -- as a preparatory training for the individual sensory and motor organs, and for the first time to provide a scientifically constructed material for children's play, but it has prevented her from grasping the most important feature, namely, the philosophical nature of the child's play."(164)

For the most part, these critics were contrasting Montessori's concept of work vs. their concept of play. They were concerned that Montessori denied the child the opportunity to do with materials whatever he or she saw fit, claiming that the child's need to act out on whatever level was the most important consideration for the kindergarten age child. They seemed to feel that there were no play materials in the classroom, a concern already found to be grounded in misunderstanding and misinterpretation [see 2.2].

3.1.2 Social Development, Individual Work Emphasis vs. Group Instruction

Everything done within the progressive pre-school classroom was designed with the ultimate purpose of the needs of the social group. It should come as no surprise, then, that those in the child study movement were quite concerned that Montessori's emphasis was placed on the individual rather than on social development per se. Beatrice Hessen, in a series of articles on "The Montessori Method," commented that "The satisfaction of society, not adherence to reality, is the fundamental epistemological standard [of the progressives]; the issue of truth or falsehood becomes the issue of social approval or disapproval. Hence the constant emphasis in progressive schools on group conformity and 'social adjustment.'"(165) Michael Berliner, in an article called "Montessori and Social Development," explained the progressives' concerns about Montessori's carrying "individualism" too far: the Montessori classroom's "lack of organised group activities and group decisions; no obligation to 'share'; importance of privacy; emphasis on personal development and independence, and lack of competition or comparative evaluation for students"(166) was in striking contrast to current American attitudes about education. Kilpatrick complained: "The kindergarten children are engaged in some sort of directed group activity; each Montessori child is an isolated worker."(167) Kilpatrick went on to say: "What we wish [the progressive method of education], then, is to put the children into such socially conditioned environment that they will of themselves spontaneously unite to larger or smaller groups to work out their life-impulses as these exist on the childish plane. From these considerations we criticize ... Montessori,... that she does not provide situations for more adequate social cooperation."(168) In Keough's dissertation on the changing attitudes about Montessori, she noted that Kilpatrick seemed inconsistent when criticizing the social experiences available within the Montessori environment. After criticizing the inadequate "socially conditioned environment," Kilpatrick "later praised Montessori's emphasis on liberty saying that only in a condition of individual freedom did the child learn social cooperation through freely chosen group experiences."(169) Elizabeth Harrison, in her article "The Montessori Method and the Kindergarten," commented that Montessori's emphasis on the individual rather than group training was limiting.(170)

Morgan and Boyd took Montessori's goals of independence through individual achievement to its illogical extreme: "In a social world where we all constantly depend for the satisfaction of the most elementary needs of life on the labors of a vast number of our fellows it is absurd to speak of freedom as consisting in the absence of dependence"... such is "the logical outcome of {Montessori's} consistant individualism."(171) "When Dr. Montessori asserts that 'there exists only one real biological manifestation, the living individual ...' then further states that the perfect life is one in which the individual 'shall be able of himself to achieve the satisfaction of his own individual aims and desires,' and also that 'social man is a natural man yoked to society,' she seems, without question, to be making the individual a complete unit of life and of educational effort. To this conception of life, upon which her system is so largely based, object{ion} must necessarily be taken. In a true conception of life, not the individual but the family must be taken as the organic unit ... surely these exercises should be viewed as valuable, not because they will make the child independent ... but because the acquired ability will make him more efficient to cooperation in the work of the home. True service implies ... a subordination of individual aims and desires to the promotion of the good of a larger organism, the social whole ... the acceptance of social service, therefore, under normal social conditions, is not to be viewed as a form of servitude."(172)

Related to the above criticisms of Montessori's emphasis on individualized instruction was the argument that group instruction, and all it had to offer, was neglected in the Montessori system.

Elizabeth Shaw, in an article entitled "The Effect of the Scientific Spirit in Education Upon the Kindergarten in Relation to the Distinctive Characteristics of the Montessori Method," suggested that only the exceptional student required the individualized presentations. Shaw noted: "Montessori's magnificent declaration of independence for child nature did not balance 'justly' the rights of the individual and of the group." Shaw claimed that this problem could be solved by the child's study movement, noting that it offers "practical ways of discriminating the masses of mediocre or so-called normal children who can wisely be taught in squads, from the comparatively few who are so brilliant or so backward that they need special educational treatment [i.e., individual instruction]."(173)

Boyd suggested that Montessori didn't recognize how much of the specific learning experienced by the children in the classroom was, in fact, a result of pure imitation. Boyd felt that Montessori overrated the spontaneous initiation of interest on the part of the child and understated the part played by adults. He seemed to feel this child-initiation was a waste of time and might neglect a particular child's failure to learn specific details.(174) In addition, Boyd felt that Montessori's failure to include the humanities in her educational program was, in part, because such humanities presentations would require dogmatic use of group instruction, which he claimed she was unwilling to do.(175)

3.1.3 Freedom

Maria Montessori proposed that she had found an essential ingredient to the education of children through her notion of freedom.

Her idea was to free the child within an environment filled with appropriate materials so that the teacher would be in a position to observe the "true" needs for growth and development and therefore be better able to satisfy these needs of the child. The critics felt that Montessori falsely claimed freedom for the child in what they felt was a highly structured and limiting environment. They also felt Montessori did not explain her terms or conditions of "freedom" sufficiently to be of much practical use or value to teachers. Dewey claimed that Montessori confused "physical liberty with moral and intellectual liberty." (176) Culverwell differed with this definition, in part, by noting: "It is only in the physical and intellectual worlds that she puts the principle of freedom or non-interference into practice. In the moral world she would dominate not only their behavior, but their thoughts. She is a social as well as an educational reformer, and she has a very clear idea of the moral character she desires to produce in her children."(177) Fynne expressed frustration in his attempt to interpret Montessori: "Like other portions of her work, Dr. Montessori's treatment of the conception of freedom is lacking in thoroughness, definiteness, and consistency. Her exposition is not logically ordered and developed. Important statements of her views which would gain greatly in meaning and force by judicious collation and sequential discussion are found in widely separated portions of a book and even in different books."(178)

A comment made by Fynne is representative of criticisms expressed by Culverwell, Boyd, and Morgan, as well: "Montessori's incomplete and vague descriptions of freedom are not sufficiently clear to satisfy practical teachers and parents who are desirous of adopting the Method in their homes. They want a full, clear, and detailed exposition of the 'concept of liberty,' showing, with typical instances, the practical limitations found necessary. For their intellectual satisfaction they want a reasoned justification of the compromise which ... necessitates deliberate interference with the liberty of the child."(179) Referring to Montessori's inadequately described concept of spontaneity, Fynne wrote: "Even her negative admonition and advice--that they [teachers] must not interfere with, arrest, suppress, suffocate any spontaneous action-- cannot be at all helpful until she gives them clearer ideas as to what actions may be correctly so described. One is not much surprised to learn that now and then the idea occurs to the teacher struggling to grasp the full meaning of this elusive principle that the presence of the Montessori apparatus frequently and effectively leads to the suppression of certain legitimate spontaneous activities."(180) As a corollary, Boyd questioned: "By what right does she impose limits of any kind on freedom? According to her own hypothesis, the life-force which impells the child to spontaneous action is essentially good in its manifestations ... what criterion is to be used in discriminating between those actions which are to be permitted, and those which are not?"(181) Morgan concurred: "Montessori finds it necessary to limit the free activity of the child. She tells us that the teacher must discern between actions that are good and actions that are evil. Having in this way provided with interfering with the independence of the child, she is next compelled to open the door for repressive measures; for she distinctly states that the teacher must 'check in the child whatever offends and annoys others' and also that it is necessary to 'suppress all those things which we must not do.'"(182)

Still further, Culverwell commented: "Here we rely on authority for the standards of right and wrong action, of what is desirable and what is undesirable."(183) Fynne noted that Montessori simply did not reconcile her biological principle of liberty with the reality that the children's freedom is limited within the classroom and is "determined by others."(184) Boyd made the interesting claim that Montessori's concept of freedom is actually "fundamentally negative, and she can only give it an appearance of being positive by a more or less arbitrary specification of acts which she says are done in independence and freedom."(185) Green commented: "Certainly we could study children more effectively when they were free, but can we, dare we, leave them free? It is freedom, or anything like it, that Madame Montessori gives?"(186)

On another level, Boyd wrote: "It is not enough to say that education should have freedom as its condition and independence as its goal. That does not tell us what education itself is. For that we must have some positive idea either of the process of growth in the child or of the ultimate aim in terms of adult life."(187)

Culverwell addressed a new note when he stated: "The real question remains untouched--namely, whether the child is best educated by doing what he chooses or what a wise guardian ordains." (188) He went on to say: "It seems not unreasonable to assert that what a supporter of this so-called principle of freedom really means by it is -- 'children are to be free to follow such spontaneous impulses as I think desirable; those which I think undesirable are to be suppressed, destroyed' ... the objection is, indeed obvious, for nowhere does Dr. Montessori supply any psychological or physiological justification for suppressing some spontaneity and encouraging others."(189)

Montessori's claims were attacked vociferously, but few of her critics followed up their public denouncements with indepth examinations of the questions they raised. It was an effective method for shutting out something new and possibly innovative by gross innuendo and far-reaching criticisms.

3.1.4 Sensorial Materials (Didactic)

The sensorial materials designed for the Montessori prepared environment were the focus of some of the most aggressive and adamant opposition. The term most of the critics use when referring to these sensorial materials is "didactic materials," though didactic materials are found in all parts of the Montessori classroom, as well as including most pre-school classroom materials. I use the term didactic as classifying those materials which teach the child; the materials providing some sort of feedback or knowledge of results such that the child's activity is self-corrective [This is Thomas Banta's definition provided in an article entitled, "Is There Really a Montessori Method?"(190)]. It's not quite clear why the term didactic is used rather than sensorial, but perhaps that's something that occurred in translation and with terminology problems. It is clear that the complaints about the didactic materials always centered on the sensorial materials.

The sensorial materials came under attack from many different directions. On one level it was felt that a child's sensorial capacities were already in excess of their need and that there would certainly be no point in further stimulating them.(191) Kilpatrick, Boyd, O'Shea, Dewey, Morgan and the Gesells all seemed to feel that there was simply no usefulness or value in training the senses because there was no transference which would be of any value to the intelligence or the child's ability to perceive.(192) Green represented their thoughts in his comment: "Do normally equipped children require special sense training? Is there sensory apparatus not sufficient for their needs? Is intelligence a synthesis of sensory powers? "(193) The conclusion was that sense training was simply not necessary as an isolated and separate activity from natural materials to be found in the outdoor environment.(194) Dewey and Kilpatrick felt especially that the formal nature of the materials as well as the limits upon how the materials were to be used overrode any richness of experience which might come from manipulation from the sensorial materials. They claimed them to be mechanical in character and of negative value.(195)

Boyd questioned whether the three to seven year-old was, in fact, at his nascent period for sensorial stimulation as Montessori purported.(196) It was Boyd and Fynne's impression that Montessori saw development as distinctive in successive stages, isolating muscular development from sensorial development from intellectual development. "She appears to regard the muscle and sense systems as being mutually independent in work and development."(197) Boyd seemed to feel that Montessori disagreed with the points made by her mentor Seguin when he noted that the "whole nature of the individual who is being educated is directly affected at every stage. He is most careful to urge that a muscle or sense should never be trained in detachment from the general functioning of the mind."(198) Related to this idea was Boyd's impression that Montessori felt the child was a passive-receptor for receiving impressions on a sensorial level. He seemed to feel that it was because Montessori was essentially 'sensationalist' in philosophical theory."(199)

Kilpatrick, Morgan and H.W. Holmes each expressed concern that Montessori did not understand the true purpose for sensorial materials. Holmes noted, "Dr. Montessori subordinates the value of the concrete mental content her material supplies to its value in rendering the sense more acute."(200) Kilpatrick noted: "We must take exactly the opposite view from Madame Montessori as to the nature of sense-training. She says that the 'aim is not that the child shall know colors, forms, and the different qualities of the objects.' We say that the aim is exactly that he may know such things, and we don't care about his getting any sense training outside of this."(201)

H.W. Holmes claimed that Montessori "seems to hold that sense-perception forms the sole basis for the mental and hence, for the moral life."(202) The Gesells admitted that the sensorial materials produce many results but claimed: "The beneficial part of the training is motor, due to the motor adapations of attention, observation, discrimination, and delicate handling. This so-called sense training is valuable for the feeble-minded, not because it is sense training, but because it is motor training."(203)

Child study leader Michael O'Shea felt that Montessorians were unaware of the latest conclusions drawn from experimental pedagogy, which pointed to the "futility of trying to refine the differential perception of stimuli through exercises."(204) H.W. Holmes agreed with this and felt that sense-training was a dangerous aspect of the Montessori system.(205) Louise Ellison, in a master's thesis entitled "A Study of Maria Montessori's Theory of Discipline Through an Examination of Her Principles and Practices and an Experiment with Her Pre-school Children," noted that "Morgan believes that analytical presentation of sensori stimuli deprives the child of more meaningful learning."(206) Elizabeth Shaw commented that "Montessori emphasizes sensation more than activity, and limits activity chiefly to slow and long-considered movements. In this way she is in danger of effeminizing education to an extreme degree."(207) She agreed with Montessori's other critics when she claimed: "Neurologists the world over agree that sense-exercise cannot possibly produce sense-sharpening--cannot increase the keenness either of the sense organs or their cortical centers. Dr. Adolph Meyer says: 'The word 'sense-training' is a misnomer. It is really attention and reaction training.'"(208) Without providing a particular reference, CURRENT OPINION magazine quoted Professor Dewey: "Sense training becomes a mere gymnastic and easily degenerates into acquiring what are hardly more than mere knacks or tricks in observation, or else mere excitement of the sense-organs."(209) Finally, the Gesells warned: "It cannot very well be argued that such sense training is to be only supplementary to natural contact with life, for, in America at least, the danger is that it will become a substitute, not a supplement."(210)

3.1.5 Correction of Errors

There was concern among educators that a child would never learn the "correct answer" in the Montessori system of education because Maria Montessori felt that direct correction was unnecessary and ill-advised.

Morgan: "To allow a child's mistakes to go uncorrected even for a short time would have a disastrous effect upon his education."(211)

Baldwin: "The child is left without knowing [if he is correct or not]."(212)

O'Shea: "It is impossible that a child should make progress simply by dropping the subject when he makes an error, and coming to it again some time in the future."(213)

3.1.6 Problem-Solving Opportunities

Dewey and Kilpatrick were proponents of the "problem-oriented" pragmatic education. They both felt that Montessori neglected to offer problem-solving, environment-adapting activities within the classroom structure. To Dewey, "The most significant question which can be asked...about any situation or experience proposed to induce learning is what quality of problem it involves."(214) He and Kilpatrick were concerned that Montessori's "controlled" environment and "limited" didactic materials denied real-life, problem-solving opportunities as well as student-determined purposefulness.(215) Furthermore, according to this line of criticism, the Montessori environment "fails to provide adequately for the most useful of modern conceptions, that of intelligent, self-directing adaptation to a novel environment."(216)

3.1.7 Creativity

The largest number of criticisms directed toward Maria Montessori's pedagogy were those which focused upon the use of what the critics felt were formal, mechanical materials, which by requiring "correct use" denied the creative needs of the child. Most often, these criticisms related to the didactic materials.

John and Evelyn Dewey: "But there is no freedom allowed the child to create. He is free to choose which apparatus he will use, but never choose his own ends, never to bend the material to his own plans. For the material is limited to a fixed number of things which much be handled in a certain way."(217)

Morgan: comparing the kindergarten exercises which engage the child in constructing, imagination ... "It may also be noticed that these occupations in affording free play to suggestion, really give a better means for developing the child's individuality than could possibly be found in the use of such fixed materials as those of the Montessori exercises."(218)

Kilpatrick: in commenting that cylinders were not to be used creatively as a train..."We find that what should be the counterpart of generous liberty, amid many and varied opportunities, has in effect shrunk to a relatively mechanical manipulation of very formal apparatus. The didactic apparatus is in intention to be so devised that with each piece one, and only one, line of activity is feasible."(219)

Ward: (this statement was not made in a critical reference, but Montessori's other critics would have liked to use this in conjunction with comments quoted from them here)..."The presentation consisted in doing just the one or few things for which the material was designed. The cylindrical insets were not to be rolled as barrels, or built up into a tower... the experimentation to find new possibilities of material, the play of the imagination, clothing the objects with other attributes, were evidences that the child was ready for or had mastered what the apparatus involved. In either case, he and it were separated."(220)

Green: This critic suggested that creativity is seen when a child turns the cylinder blocks into soldiers and trenches for use as escape material and that a Montessori teacher would not allow such use of the materials.(221)

Boyd claimed that Montessori felt that all imagination was useless and dangerous. He drew this conclusion partly from an article written by Josephine Tozier, from which he quoted: "Montessori does not encourage imagination, because she feels the strength of imagination is so great that it will fulfill its own work and her business as an educator is to eliminate those thousands of false impressions which children get from being too fanciful."(222)

Evelyn Weber, while providing no reference, claimed as to Margaret Naumberg [a student of Maria Montessori's who went on to create the Walden School concept of applying the principles of analytical psychology to the education of normal children], that "one attempt to utilize Montessori's teaching techniques and material convinced her that the materials were unimaginative and the method limiting to children's creative endeavors."(223) [I was unable to find such a comment in any of Naumberg's writings on Montessori.] Robert Rusk, who agreed with Montessori that it was a mistake to employ fairy-tales to train the imagination, made a significant observation when he wrote: "Montessori was probably in error in regarding imagination as a substitute for the real and not an independent line of activity related to the real as play is to work."(224) The important question is whether this was an accurate description of how Montessori regarded imagination.

3.2 Montessori's Theory

It is necessary to have a foundation in Montessori theory before attempting to examine some of the specific criticisms detailed just above. We will explore Montessori's conception of the purpose of education as well as her conception of child development in order to compare and contrast comments from her critics with Montessori's ideas. It has been my hypothesis that very few criticisms directed to Montessori's own ideas were based upon a real comprehension of what Montessori meant. Although a few "legitimate" criticisms do surface, for the most part, this attempt to explain thoroughly Montessori's theory will resolve many of the criticisms. I have tried to address those criticisms not obviously resolved through this explanation of Montessori theory in detail. Following is the outline I have used:

3.2.1 Purpose of Education

3.2.2 Social Development, Individual Work Emphasis vs. Group Instruction

3.2.3 Freedom (Liberty, Structure, Limits, Spontaneous Activity, Independence, Dependence, Individuality Choice/Initiative, Discipline/Self-Control, Obedience/The Child's Will, Rewards and Punishment)

3.2.4 Needs of the Child

3.2.5 Creativity/Imagination/Intelligence (fantasy, fairy-tales)

3.2.6 Social Development, Individual vs. Group Instruction

3.2.7 Purpose of the Didactic Materials, Isolation of Features

3.2.8 "Child's Work"

3.2.9 Problem-Solving Opportunities in the Classroom

3.2.10 Errors

3.2.1 Purpose of Education

It was Montessori's idea that the purpose of education was not a set curriculum or a set amount of knowledge to be taught. Rather the purpose of education was to meet the developmental needs of the child; thereby the child would be a happy, fulfilled and competent human being who would grow to become a happy, fulfilled and competent adult. Montessori noted: "The successive levels of education must correspond to the successive personalities of the child. Our methods are oriented not to any principles but rather to the inherent characteristics of the different ages."(225) The way to do this was to prepare a learning environment which provided for those developmental characteristics in which the child would be free to show his/her interests and needs and to become competent in the construction of the child's own self. This meant that it was necessary to provide an environment which would assist each child in becoming an independently functioning child (not non-social}, in control of oneself and one's options so that one could continue to show ones needs and interests, satisfying them through progressively higher levels of achievement. Montessori felt that childhood was the time during which the future adult was being created and that it was education's role to assist in such development.

This all sounds familiar to us today, but it was a revolutionary perspective at the turn of the century.(226) Montessori wrote: "Our teaching must only answer the mental needs of the child, never dictate them...The task of teaching becomes easy, since we do not need to choose what we should teach, but should place all before him {the child} for the satisfaction of his mental appetite. He must have absolute freedom of choice, and then he requires nothing but repeated experiences which will become increasingly marked by interest and serious attention, during his acquisition of some desired knowledge."(227) {This is a good example of Montessori's getting wrapped up in making a particular point and minimizing the role of the teacher, which alarmed many of her critics. In fact, there are numerous other examples where she gives the role of the teacher the regard it is due.}

The two keys to assisting in this development were: 1) providing a prepared environment consisting of the teacher (see Section 4.0 for a fuller analysis of Montessori's concept of the teacher) and a physical learning environment which would allow the child to explore the world safely, on his/her own particular level, and 2) freedom. Montessori felt that there was no absolute way for us to know the needs of a particular child or his/her ability to absorb directions and information from adults. She, therefore, went about to create an environment of materials which would allow each child the opportunity to examine, explore and absorb the essential ingredients of materials; functioning at his own level, uninhibited by the expectations, demands and time-limitations of the traditional teacher-directed classroom learning environment. It was very clear to Montessori that these two essential factors were nonetheless secondary. "The origins of the DEVELOPMENT, both in the species and in the individual, LIE WITHIN... Environment...can modify in that it can help or hinder, but it can never CREATE."(228) Montessori's goals were twofold: not just that the child develop but that he learns to "help adapt himself to the physical conditions of his environment and to the social requirements dictated by the customs of the group in which he lives."(229)

Mario Montessori, Maria's son wrote, in an article entitled "Explanation of Certain Leading Concepts," "The Montessori approach to education follows the lines of developmental psychology. Ours might be called: DEVELOPMENTAL EDUCATION. It differs sharply from education as normally understood, where the emphasis is on the ends pursued and what is felt to be important is the career or occupation for which the student will be equipped by the time his studies are over...The Montessori Education is concentrated on the phases of the individual's growth from birth to maturity. It tries to respond to his needs as he develops and to help the process of his adaptation, without laying too much stress on the programme officially imposed. Our Montessori schools cover the same programme {as is included in traditional schools}. In fact {the Montessori} programme is generally wider but this is because the children themselves, as their minds expand, pursue their interts in all directions. We regard their studies as food on which the child's psyche can feed in order that it may become adapted to society and the world and to the best that civilization has to offer. It is the child and his optimum development, not his stock of knowledge, which is the main objective of DEVELOPMENTAL EDUCATION."(230)

Specific developmental tasks Montessori felt were requirements for individual success and satisfaction include ability to choose and make appropriate decisions, respecting the individuality of others, being aware of own needs and the needs of others, opportunity to strive toward individual self-fulfillment, assuming responsibility for one's own actions, initiative, independence, self-confidence, ability to think, to meditate, sense of security, trust of oneself to develop as a spontaneous person, freedom to become creative and to develop at the child's own rate.(231)

Montessori used the term "auto-education" when describing the function of the didactic materials. I feel it is an unfortunate term because it implies passivity. Montessori meant that the materials offered child-centered learning (i.e., self-teaching/learning as opposed to automatic education). Teacher-direction was seen as completely inadequate in determining the need and interest levels of the child and the child's absorption of and capacity for learning. The second key to Montessori's theory of education was freedom for the child to explore and discover through freedom of movement and choice. We will explore this extremely complex concept in Section 3.2.3.

Montessori sought a learning environment which maximized a child's interaction with his/her own personal growth and development. Thus, she was open to consider different options when analyzing the role of the teacher and the physical environment. She noted: "The ability incessantly to recall a wandering and scattered attention, always ready to vanish, is the real root of judgement, character and will; that system of education that succeeds in bringing this faculty to the highest degree should be the ideal and standard system."(232)

"Autonomy" is a term which appears on a regular basis when people describe the goals of a Montessori learning environment. Riley Gardner, a psychotherapist, noted: "When we say that the child is allowed to learn autonomously in the Montessori school, we mean this in a very special sense. His primary autonomy is from the adult teacher, who--in contrast to the teacher who uses a traditional didactic approach--intrudes into the child's world of discovery in a non-evaluative way, and that only when it seems necessary. The child is, of course, not completely autonomous in the situation. His autonomy is limited by the self-correcting didactic materials he uses. The Montessori method seems to put the child into effective coordination with certain features of external reality in such a way that he becomes the instigator of his learning."(233)

Whether or not the Montessori environment does, in fact, successfully encourage autonomy was the question raised in Thomas Banta's research. Banta defined the "fully functioning person" as "A happy person. A competent person. A person who enjoys life, and growth and change. In relation to autonomy, this is a person who can make his own choices, a person who can feel responsible for his choices."(234) "A large body of diverse literature points to one central and important ingredient to the good life: that ingredient is autonomy--social and personal autonomy."(235) Banta explained that:

"1) The autonomous person is NOT a nonconformist and 2) the autonomous person's activities are NOT impulsive and out of joint with his culture and his social order...primarily, the autonomous person is an intersted person. He CARES about things...These interests of the autonomous person serve two important functions for autonomous behavior. First, each chosen interest reinforces the experience of SELF-DETERMINATION of his own biophysical system--a condition...that is necessary for optimal functioning...Second, involvement...is protective {from distraction of external environmental demands and internal impulses.}"(236)

Banta singled out four educators whose philosophies he found praiseworthy for their devotion to the developing child's autonomous growth via interesting projects: Maria Montessori, A.S. Neill, Carl Rogers and Sylvia Ashton-Warner.(237) "All four of these persons want to educate children for adulthood, and their major concern is that the child and the adult be free. All of them argue that if the child is free to choose projects that interest him, the adult will very likely grow in a positive direction."(238) While Banta noted the distinctiveness of their styles and content {Montessori "emphasizes the structure and the didactic 'pull' of the teaching materials"(239)}, he felt that they shared this one central theme of autonomous growth through interesting activity and that all of the other differences were insignificant with relation to this essential feature which they do share.

Banta has perceived Montessori's purposes clearly. It will be useful to keep some of his key points in mind as we move on to examine particular details of Montessori's theory:

- a fully functioning person who develops into a fully functioning adult
- a happy person
- a competent person
- a person who enjoys life, growth and change
- an interested and interesting person
- a caring human being
- in control of self, can concentrate and direct self despite external demands and internal impulses
- able to make choices
- is responsible for own choices

Montessori felt it was essential that educators understood child development in order to assist it. She formulated, with the help of current psychologists, and based on her many years of observation, a theory of "four planes of development." (Another term Montessori frequently used was "epochs" in place of "planes.") Montessori's perceptions and conclusions about the changing needs of the child for specific materials, teaching methods, etc. were based upon an appreciation for the changes which occur in each child as he/she develops. Therefore, she proposed different learning environments for children at different planes of development. Montessori's critics appeared to be completely unaware of her concept of the four planes of development. Many critics failed to be aware of Montessori's flexible approach to learning based upon these changing needs during development. I frequently found criticisms directed toward a different level of development than was being examined by Montessori. For example: Dewey's complaint about an over-valuing of sensorial materials related to his perception of the needs of the five to six year-old, while Montessori was referring to the two to four year-old. Boyd's concern for a lack of humanities in the classroom was, in part, because he was reading Montessori's preschool curriculum, not her elementary program where a great deal of specific attention is devoted to the human arts.

3.2.2 Planes of Development

Each plane indicates the culmination of significant biological, physiological, social, emotional, intellectual, personality, spiritual and language changes. It is interesting to note that Montessori saw the first and third "planes" as being stages of great transformation while the second and fourth planes were periods of more uniform growth.

The first plane of development includes the child's first six years. Montessori described this plane as the time of the "absorbent mind." "It is a form of mind that is quite different from that of the adult."(240) Though the concept is quite complex, Montessori meant by the term "absorbent mind" that the child has a heightened sensitivity to learning. Some of Montessori's critics are confused by this term and feel that she is implying passivity on the part of the child. In fact, Montessori felt the child is never passive. The absorption always involves interest and activity. Montessori was observing the exceptional receptivity of the young child when she coined the term "the absorbent mind." This receptivity was exhibited not only by the ease in which the young child learned vast amounts of material, but also by the eagerness and enthusiasm for doing so. It is essential that we appreciate this combination because everything Montessori designed was meant to maximize its fruitfulness. From her observations, Montessori concluded that there were specific "sensitive periods" in which the child is unconsciously "absorbing" details of a particular nature. For example, a "sensitive period" for "order" was noted as a common occurrence for the child of about two and one-half years. Special sensitivity for language lasts the first six years, according to Montessori. "Sensitive periods" for mathematics, sensory experiences, etc. were explained as being the source of intense interest and unconscious drive to learn at specific levels. A list of the "sensitive periods" and the general ages Montessori observed them occuring are listed as Appendix C.

Initially (during the time of these critics), Montessori subdivided the first plane of development into two levels: 0 - 3 years as existing mostly at an unconscious absorbent mind level, and the second stage, 3 - 6 years, as existing at a more conscious learning level.

Montessori felt that the first stage of this plane, birth to three, was the time period during which the child's faculties were being created:

Birth to Three:

- period of unconscious growth and transition via absorbent mind
- child learns in accordance with natural drives and responses, intelligence formed via movement
- enthusiastic and "effortless" discoveries of environment (again, "effortless" is not intended to indicate passivity: it means "with ease")
- cannot be directly taught (but can learn through self-activity)

- period of creation from "nothing"
- ego develops as child becomes conscious

The second stage, 3 - 6 years, was the creation of the conscious development related to such capacities as intelligence, the will, and imagination.

Three to Six Years:

- use of faculties to create a consciousness
- more conscious stage of development
- active exploration and discovery
- anxious to learn
- conscious of sounds, needs to be able to communicate
- desires to respond to people and environment
- rapid language development
- from the environment: a) discovering via hands and other movements; b) learning qualities of things; c) moving to abstract conceptualizations to where touch is not needed to know the quality of things
- not quite ready for teaching, must still do all discovery for self
- obedience is still out of reach...has no comprehension of right and wrong; obeys to please or out of fear of punishment but is not in complete control of own will.

During Montessori's later years, when she spent much more time observing the child from birth through infancy, she sub-divided this first plane of development into three parts instead of her original two, dividing it into two-year sections: The first two years, the years from ages three to five, and the years from six to seven. In addition to the movement from unconscious development to conscious development, Montessori noted that we cannot reach the child to teach him directly during this period. Standing's interpretation of Montessori on this point was this: "We cannot intervene in this mysterious process of passing from the unconscious to the conscious construction of the human faculties. It is a process which goes on independently of us, and we can only help by providing the best conditions."(241) In the first stage the child absorbs the world through his unconscious intelligence, through movement. During the second stage he takes in consciously, using his hands. The hand has now become the conscious instrument of the brain and cognitive growth is not separate from physical activity.

The *second plane of development*, from 7 - 12 years, marks the child's need "to enlarge his field of action [whereas] the closed environment is suited to the small child. [During the first plane] social relations are established with others. [During the second plane] the child needs wider boundaries for his social experiences. Development cannot result by leaving him in his former environment."(242) The child is ready to move out both psychically and physically from what would become a limiting environment into the community. This is a period of healthy and uniform physical growth where confidence is expanded and where a new sense of curiosity and intense interest in morality and values becomes conscious. It is a time of intense questioning, very much related to the passage from the concrete sensorial foundation material level to the abstract. Montessori observed that "This preoccupation with right and wrong represented a new interior sensitivity, the conscience."(243)

Six/Seven to Twelve Years:

- peer group/social life becomes key
- strongest period of growth: changing from weak and dependent to (hopefully) self-secure and confident, self-respecting, self-reliant, physically healthy
- learning skills and self-evaluation as a human being
- curious, inquisitive, searching for new concepts
- questioning, getting into abstract reasoning, the how and under what conditions, the why, and the right vs. wrong
- great observations and explorations consciously made
- can work closely with nature
- growing awareness/learning about other people
- asking about right and wrong/ needs help to answer own questions and needs to validate own thinking

The third plane of development is considered to be adolescence or puberty, ages 12 - 18. Montessori drew a parallel between the first and third stages because she thought there were similar characteristics between these two planes. She also felt it was necessary to divide this section into two subcategories: 12 - 15 and 16 - 18 years. This is a stage, as was the first one, where rapid biological/emotional changes occur. There are transitional periods, times for great mental and physical development during this plane. It is a delicate and difficult stage, similar to that of the new pre-school child when he is dependent upon his environment for supporting structures. An analogy may be drawn to the first plane of development in relation to the unconscious, rapid growth and development which happens during the first half of this period while the second half finds the young adult becoming more consciously aware of the remarkable physical and emotional changes and of how one may relate to the outside world as an adult.

Twelve to Fifteen:

This is a period wherein Montessori recommended an effort to minimize external pressures because of the intense changes occuring internally.

- insecure with biological and emotional growth that has been extremely rapid, too rapid to comprehend yet
- new relationships with everyone on the basis of one's new body and self-image
- new emotions about relations with other sex
- beginning to see other parents as human beings with faults instead of perfect gods, looose security in this, great confusion is possible during this stage
- need to spend lots of time rediscovering new self, to get adjusted to new body, emotions, to recognize the good in oneself, to enjoy the new self
- emphasis should be on expressive activities in the arts, drama, music, sports, and in exploring nature
- whereas the second plane still involved much independent activity in the learning environment, this period does best with lots of group and social activities. The learning is centered in group related exercises
- each child should be allowed responsibility that is non-

repressive

- the child is capable of making good choices if allowed to discover ramifications of choices
- the demands from family should be reduced
- communication lines need to be wide open; there is great need to talk out questions

Sixteen to Eighteen:

- much more secure
- beginning to handle self on a conscious level
- has worked out many emotional conflicts
- education environment can move back to university-type system and independent pursuits
- needs discussion on marriage, sex, emotions, interpersonal relations, understand communications processes, understanding basic psychology of human behaviors
- real approach to duties
- learning to give and take
- an inner resource developing for true respect of others

The Fourth Plane of Development, Eighteen to Twenty-Four:

At the fourth plane of development, the pertinent characteristics are:

- great independence needed to pursue university interests without financial burdens
- need to be allowed to pursue studies to individual depths, studying with independent adults.

- parallels characteristics of the 2nd plane

Montessori suggested quite a different style of university programming for the student who had experienced learning environments consistent with her suggestions.(244)

Montessori felt that each of these planes reflected the growth and development of each human being on entirely different levels. She noticed that at the successful completion of each stage the child appeared to be happy, exhibited inner joy and peace, feeling the sense of self; being able to share the gift of himself or herself, being a true, loving and giving person. She noted that each stage provides the foundation for each successive stage. Montessori reminds us that despite the appearance of these concrete dividable levels, there are no absolute ages for any particular child. (I would like to note here that it is no accident that Erik Erikson's Eight Stages of the Development of Man sound familiar here. Before moving into psychology, Erikson completed a two-year training program with Montessori in Germany with Emma Plank as his teaching supervisor!)(245)

It's important to comment here on how obvious it should be that the educational program and environment in a Montessori setting was to be appropriate to each plane of development. This means that the learning environment was designed to be significantly different for the first plane than for the second or third. My focus in this paper has been on the pre-school level, at the first plane of development, first because that's where the critics focused, and second, because it made the task more manageable. But it is necessary for us to keep in mind that when we think about some of the criticisms raised against

Montessori, the critics were assuming that her learning environment would be the same for a 7 year-old as it was for a 5 year-old. The criticisms about the needs for greater social opportunities, for example, become more a question of whether she was right about the age at which the activities are most appropriate, rather than whether they existed within the framework of her proposed learning environments.

3.2.3 FREEDOM as it Relates to and Inter-relates with: Liberty, Structure, Limits and Material Use, Spontaneous Activity, Independence, Individuality, Social Development, Choice Initiative, Discipline/Self-control, Rewards and Punishment

Attempting to provide a framework by which the reader will be able to comprehend Montessori's philosophy about all of the above topics is the ultimate challenge of this study. But without doing so, it will be impossible satisfactorily to examine the criticisms and put them into perspective. The task, however, is immense, and there is no way to resolve all of the possible questions which might arise. It is my hope that enough of a foundation will be laid here so that the reader will be able to examine criticisms and have some sort of perspective as to whether those criticisms are valid in relationship to understanding Montessori or whether they simply miss Montessori's points.

Freedom is the underlying principle from which all of the related topics of structure, limits, spontaneity, independence, dependence, and the like function in the classroom. Montessori used, or at least her translators used, the term "liberty" interchangeably with "freedom." {Montessori recognized the use of the term "liberty" in its political connotation, as well. She spoke of liberating peoples on a political plane, that it is through this individual liberty that peoples will be able to fight off oppression on a social level.} Montessori's concept of education was to let the child indicate to the adult, parent or professional educator what he/she needed in the way of learning materials. We will discuss in Section 4.0 details about the teacher and how she or he uses observations as a guide in providing an appropriate learning environment.

It is essential here to understand Montessori's appreciation that it is only by providing a "free" environment that observation becomes a legitimate tool for determining the needs of a child and a classroom of children within any environment. Without freedom observation will do the teacher no good other than to observe the child within specific limitations. Of course, all environments are limiting to a certain degree.

"Freedom" does not mean that the child is left alone to do whatever he or she wants. It is through the freedom of movement and progressive development in learning to make choices that allows a child to express his/her developmental needs in his/her environment, which is rich with satisfying materials. Wrote Hessen: "Liberty, in the Montessori system, does not mean aimless flitting about as whim dictates, nor does it mean license for destructive behavior that impairs the child's ability to learn and interferes with the rights of other children. The alternative, however, is not blind-obedience. What a child needs is guidance--rational guidance in the form of principles he can understand and apply to specific situations.

The liberty enjoyed by the child in the Montessori nursery is freedom within the context of objective principles. This prepares him for adulthood, for the time when he will be required to understand the facts of reality and be responsible for his own choices and actions."(246)...and I would add, "while on the child's level" (i.e., understanding freedom on a child's level is completely different from freedom open to adults). Fynne appreciated the nuance of Montessori's definition of freedom when he noted that Montessori agreed "in the main with that of some philosophers who consider [freedom] from the social and political standpoint. They say that liberty must have both negative and positive significance. On the one hand, there must be freedom from all unnecessary interference, from arbitrary restraint and constraint. On the other hand, there must be the positive provision of a social and political order which shall afford to the individual opportunities for the exercise and cultivation of his capacities."(247) This central principle of Montessori, that the child should be free to develop through spontaneous energies and interests, was agreed upon by most of her critics. It fit in very neatly with the progressives' concepts of education here in America.(248)

While Boyd, Dewey and Kilpatrick appreciated Montessori's concept of freedom on a biological and social level, they thought she was denying such on an intellectual level. This came from their conclusion that the materials were to be used in very limited "correct," "in-only-one-way" fashion; but while Montessori recognized that freedom must begin on a physical level, her concept of freedom was much deeper than any of her critics seemed to appreciate. True freedom, as it were, could only come through "complete realization of self."(249) Mario Montessori and Claude Claremont described Montessori's "deeper freedom" as being freed from the restraints of adults, intially on a physical level, so that the child can truly draw from within to pursue his/her needs on other levels because the child is not frustrated or denied exploration of them or access to them.(250)

Walter Halsey, in an article entitled "Evaluation of the Montessori Experiments," provided some good perspectives here. To know Montessori, he stated, one must "understand the central organizing idea. It is freedom: freedom from one personality tyrannically impressing its own set of characters upon another; freedom from conventions and traditions; freedom for coming into perfect adjustment with all of one's environment through the activity and development of the whole soul as well as through every faculty of the sensorium and of the motorium; freedom in the exercise of intelligent choice and discrimination; freedom to respond to the appeal of definite educative problems recognized as practical; freedom to enter into the joys of discovery and mastery, both in one's environment and in one's own nature. Physical freedom, mental freedom, moral freedom, freedom in the earliest learning processes, during the whole period of school discipline, and in the final decisions which make character and destiny."(251) Montessori's critics seemed to skim over these features in a Montessori program and were unable to get beyond the overt purposes of specific materials.

The question for Montessori was how to create a learning environment which permits this deep level of freedom. To be able to have a group of human beings interact in one room, it is necessary to put some safe limits on the children as well as to recognize that if the children are to be free within the classroom, one child has to respect the freedom of another. In the Montessori classroom this means that the child will not be allowed to misuse or abuse a person or a material. The structure of the classroom and the sensitivity of the teacher to minimize interference from the teacher allows this to happen with a minimum of constraints upon each child. The concern of critics that Johnny is not allowed to use a cylinder block as a missile or that the purpose of specific materials inhibit a child's creative use of materials needs to be juxtaposed with Montessori's perspective. In Radice's book THE NEW CHILDREN, she quoted Montessori as saying: "A person with vague ideas about liberty might conceivably be sorry for a fish because it was in the water ... every living being has its own type of liberty, and all we can do is to watch, to provide, and to help each to live according to its needs. We shall not be giving the human child liberty if we simply let it loose to run in the fields like an animal. This kind of liberty is too limited for man. We can give the child freedom by providing it with the means of development and by removing obstacles to development -- removing our own preconceptions also, insofar as they are stumbling blocks to the child."(252) Robert Rusk, in his book THE HISTORY OF INFANT EDUCATION explained: "The difference between Montessori and her critics is ultimately one of different philosophies of life. Both make freedom their aim, but whereas Montessori seeks and finds it in the world of truth and reality, her critics seek freedom from the world."(253) In a recent lecture Alexander Solzhenitsyn commented, "Freedom is a condition, not a self-sufficient end."(254) Montessori might have said this herself. The progressives saw freedom as an end while Montessori saw it on two levels, initially necessary as a means to attain the greater end of freedom and liberty through personal and social fulfillment.

This concept of freedom to be created in the classroom runs cross grain against our very traditional ideas about control in the classroom. It is difficult to perceive of an environment which will allow this sort of freedom to occur. Montessori experimented with, designed and organized a learning environment which she felt met her criteria for encouraging in the young child free exploration of self and of the environment. True freedom of self, in exploring self and environment, required that each child develop independent skills. Montessori was not talking about a child living as an isolated unit, independent of the world. She was focusing on the necessity of each each child's becoming competent in those skills which would allow this free exploration and discovery to occur. This meant analyzing and making concrete the most simple and basic skills. This meant isolating those skills from the need to use them so that the child would not become frustrated and defeated in his or her pursual of some great interest.

The critics were quite confused and outspoken concerning Montessori's concept of independence and individuality. Boyd felt, "Dr. Montessori's discussion of individuality is vitiated by her failure to realize that human individuality is a social, not a biological fact."(255) On the other hand, Boyd noted that Montessori "invented her system of didactic apparatus to meet a generic need of child-nature, but instead of forcing it upon her pupils because it would be suitable for them as children, she allowed each pupil to use it in the way that seemed good to him, and so gave individuality the chance to assert itself."(256) Boyd felt that Montessori did not fully appreciate the "significance of her discovery ... that the right way to encourage the inner development of the child is not by a scheme of education based on the teacher's knowledge of his individuality ... but by leaving him/her free, and providing occasion for the exercise of capacities without which individuality cannot come to its full perfection."(257) Boyd seems to have failed to recognize Montessori's total grasp of what she was offering. He did appreciate her recognition that the teacher is unable to provide completely for the individuality of each child. It is impossible for the teacher to adapt instruction on the level each child requires, and, therefore, the materials needed to be designed to allow each child to determine his own individual needs and get them from the materials. The teacher, through her observations, will get significant clues about those individual aspects of each child. Even William Heard Kilpatrick, noted Keough, "found the idea of individual liberty attractive. He singled out for praise Montessori's practice of offering the child a free choice of activity and of the length of time he would spend at any chosen activity. This, Kilpatrick agreed, taught the child self-direction."(258)

Nancy McCormick Rambusch, in her book LEARNING HOW TO LEARN, helps us connect the idea of freedom and independence with Montessori's insistence on the right of children to work individually rather than in groups initially. "Montessori realized that the work of the young child was the construction of himself. He needed to be a self before he could be absorbed into a group. He could accept or reject the overtures of others only when he possessed a strong sense of his own identity."(259) And Montessori found through her observations that frequently it was not until the first plane of development was completed that a child was in the position of being ready for involvement within a group on a competent and self-sufficient level. Though the child participated in many group activities before this time, the goal was to provide the child with the choice to determine for himself or herself when to join group activities. This is done in full appreciation of the developmental needs of the young child, recognising the stronger need for the creation of internal order than for group-level information.

Sir Thomas Percy Nunn, in his book, EDUCATION: ITS DATA AND FIRST PRINCIPLES, noted:

> "Dr. Montessori provides that children shall learn to live with others, to cooperate with them in work and play, to acquire social and personal graces. But the most characteristic part of her scheme consists in the devices -- largely taking the form of 'didactic apparatus' -- by which they are led to teach themselves what infancy and childhood should learn; such as the skilled use of their powers of movement and sensory discrimination and the elementary arts of reading, writing, and number. Left to themselves, under the supervision of the teacher or 'directrice,' to go their own way at their own time, to choose their own tasks and to be their own critics, the little students acquire, it is claimed, a high degree of initiative, self-reliance, and

> power of concentration; they learn self-respect at the same time as respect for others, and develop a habit of serious, purposeful industry rarely shown by children driven abreast along the road of progress in accordance with the traditional method of class-instruction."(260) Nunn went on to say: "and there is no reason to doubt the justice of these claims. Indeed the most cautious observer, if he could pass from a class of children recently released from the bondage of the old method to one that has learnt to use the new freedom, and could compare the noisy restlessness and aimless disorder of the former, with the calm and happy self-guided industry of the latter, would find it hard to remain a sceptic."(261)

Even Morgan saw the freedom principal in a positive light: "Education ... as a means of awakening and developing life, must permit the 'free and natural manifestations of the child,' must respect the 'first indications of individuality,' must leave the child 'free to develop,' and must 'avoid the arrest of spontaneous movements and the imposition of arbitrary tasks.'" |Those comments within small quotes are quotes Morgan took from Montessori's writings.|(262)

Boyd felt that despite the good foundation and interest in freedom and spontaneity, those aspects could be manifested in other programs which don't rely so heavily on didactic apparatus, which severely limits the aesthetic needs of the child. His claim that Montessori's freedom was a negative sentiment, i.e., that Montessori talked about freedom from interference and freedom from oppression, is an interesting twist. Keough noted that Boyd "preferred that the core idea of a philosophy of education includes some positive statement about the ultimate goal of education with a process of growth in the child."(263) While it is easy to understand that Boyd was focusing on Montessori's claim that a free environment was freedom FROM oppressive elements, it is difficult to understand why he didn't also appreciate that the classroom was, in reality, a positive environment where the child was free to move, had free access to the materials, was free to choose to continue an activity or not, was free to work individually or in a group, free to progress at his own interest level and rate, etc. Boyd made it quite clear in his book that Montessori did not provide an adequate philosophy for education. He criticized Montessori for being too empirical and not having a philosophical foundation from which the entire prepared environment would logically be derived. Boyd's criticisms focused, primarily, on philosophy. He held that the most important precondition for any educational program was a philosophically sound foundation, which should be the source for determining everything a teacher would make available. Montessori's flexibility for specific situations and needs which arose in the classroom and from which she might alter her materials or attitudes about how something should be done was unacceptable to his line of thinking.

Montessori's concept of dependence was based on a perspective that it is not only the servant who is dependent upon his master for physical and other needs; but, in many respects, it is the master who is most dependent upon his servant because the master is unwilling or unable to do things for himself. The critical point here is dependence based upon incompetence and inability to do for oneself what one needs to have done or wishes to do. It really does not speak to the morality of servants as much as to the immorality of children being denied the right to develop in competent, independent ways. Montessori observed that we habitually serve children. She wrote: "This is not only an act of servitility toward them, but it is dargerous since it tends to suffocate their useful, spontaneous activity"(264)... It is only through the progressive increase in independence that we can see the free child, observe the child's needs, and allow his or her spontaneous activity to guide the teacher in "trying to determine the child's ideal world or 'environment.'"(265) Through observation of children's spontaneous manifestations Montessori "soon found a constancy of interests in certain things"(266) and was able to create a prepared environment which met and could anticipate most of the needs of the majority of the children. The environment which she designed was never intended to be etched out in stone. It was to be used only for as long as it was useful. It was up to each teacher to be sensitive in her perceptions of what she observed to know what and when children required new and different elements in the classroom.

In conjunction with this concept, Montessor came to realize that it was only through a structured environment that one could be flexible. There could be no freedom in chaos. Celma Pinho Perry in describing "a Montessori all-day program" noted: "You must plan strictly and continuously--and yet, you must continuously accommodate to the child's need. There must be a readiness to flow--to adapt to the needs of the group and to each child, but only after you have extensively planned your program. Not only must the physical environment be meticulously prepared, but you must also have a well developed curriculum with progressive presentations for each group and for each child within the group."(267) This idea, totally dependent upon a very different concept about the role of the teacher, is only possible when the teacher is not immersed in the moment-by-moment directing of activities found within the traditional classroom. The critics could not even conceive of being able to combine this concept of structure with flexibility because they could not appreciate the options open to the functioning of the prepared environment where the role of the teacher was so significantly altered. Celma Pinho Perry went on to add an important conjunction to her earlier statement: "Each child must feel free to accept or reject the presentations offered. You must present real options, each week, each season, and each year. Too often the child is left on his own [in a Montessori environment] because adults are not ready for a fruitful dialogue. Too often the same things are presented because nothing else is ready."(268) This quote gives us some perspective on one of the major problems in interpreting Montessori for individual teachers. Because the classroom does provide such detailed structure it is easy to rely too much on that structure and make it inflexible and rigid rather than using it as a springboard or foundation. It is, once again, the choice of the teacher in any classroom of whether to use the structure of the prepared environment as an internal skeleton which provides support and frees the body for great movement and exploration or as an exoskeleton to limit one's motion. It is much easier to limit motion than to encourage and accommodate it; thus, we find some teachers using the structure of the Montessori environment rigidly, as an exoskeleton.

To explore the concept of freedom within limits and the related idea that there is no freedom in chaos, we should explore some of the assumptions of a few of Montessori's critics. Frequently, it seemed that the critics were suggesting that in order to provide free choice for the children, in order not to limit and make external demands upon the young child to inhibit the child, it was a grave demand to ask a child {in a Montessori classroom} to follow specific rules of order within the classroom (e.g., to return materials to the shelf where they were found when use is completed). They saw the teacher's insistence upon this order in the classroom as a limitation rather than as a source of strength. So, we must examine their own vision of the classroom, wherein the traditional classroom teacher must be the one to provide and put away each activity: the teacher must organize all exercises; he/she must determine who is to use what materials; he/she is responsible for making sure each of the essential ingredients in each piece of material is where it should be, or the child is limited to whatever is available strewn around the classroom in whatever form it has been left. This, Montessori would say, is not freedom for the child. In this situation, both the child and teacher are truly limited in what they can do. Whereas Montessori's critics found her rules of order and safety to be limits on the child, their view of a classroom projected far more limits in the manner in and extent to which activity is made available to the children.

Montessori's critics misused her quotes when she discussed repressing those behaviors which were unsafe, were antisocial or did not respect the individual rights of each child. There was great concern that Montessori's attitudes about what should be repressed were as arbitrary as any other traditional teacher's might be. The goal, however, was to interfere as little as was appropriately possible. Once again, the sensitivity of the teacher is required to determine where the lines fall between the safe and respected options of one child and those of another. The culture in which one lives determines much of what is or is not acceptable. Bailey quoted Montessori as saying, "Go as you please, do as you wish, play with whatever you like -- only be careful not to hurt the work or the body of any other little one."(269) Kilpatrick appreciated Montessori with respect to this. He offered the following explanation for the functioning of Montessori's ideas: "'The liberty of the child should have as its limit the collective interest.' 'Absolute rigor' is in extreme cases permitted. While these statements might be so interpreted as to apply coercion and suppression, there is in practice little need of positive restraint, much less than one would have supposed. On the whole, the children work as ants about a hill. At times the noise would prove a little trying to one brought up in the belief that children should be seen and not heard. Probably, however, any protest against the noise would be rather conventional than just. To the writer, the suggestion of great individual liberty proves very attractive."(270){The phrases in small quotes come from Maria Montessori's book THE MONTESSORI METHOD, p.87.} Kilpatrick later stated, in his book THE MONTESSORI SYSTEM EXAMINED: "Wrong conduct is best avoided by encouragement of proper impulses...the child thus learns to 'get on' with others in a regime of freedom...Madame

Montessori's re-emphasis of freedom is highly commendable."(271) The task, which critics and advocates alike would like Montessori to have achieved, of determining exactly which behaviors and activities were acceptable under detailed circumstances was and is simply impossible. Montessori certainly provided quidelines, but the teacher is always needed to determine the essential features of a particular situation within a particular culture. Claude Claremont noted: "Dr. Montessori does not, in fact, want the teacher to become obsessed by her rule as to the use of the apparatus. It is merely a guide she should have in mind."(272)

Below are some comments which provide more images and perspectives on how Montessori attempted to minimize interference on the child. The first one which comes from notes taken by Lisl Barnett during a lecture of Maria Montessori's at the 1925 London training course, epitimizes the difficulty in discerning Montessori's intentions because of confusion concerning terminology (e.g. what she meant by the term "play):

Montessori: "It is not important what he does with the colours {for example}, even to building houses, so long as he is discriminating between them, but when he uses them for merely play, their purpose is insulted and he must put them away."(273)

"Children explore materials in two ways: One child is toying again and again to place them {Montessori was referring to cylinders here} correctly. He is going the empiric way. Another child will observe beforehand in order to avoid mistakes. Both ways are right and the teacher has not to interrupt the working child."(273)

"Some teachers hold the false idea that no activity of the child should be disturbed. This is absurd. Child fighting over the cylinders are misapplying energy."(273)

Culverwell: "The principle of liberty does not mean for Seguin that children are to be allowed to have their own way in all things. On the contrary, 'repression,' he says, 'cannot be avoided; let it be employed in its mildest forms...the means of repression are what the intelligence and feelings of the teacher make them.'...A true disciple of Seguin, Dr. Montessori's view of liberty is in the closest accord with his. Again, as with Seguin so with her, the anti-social or disagreeable acts of little children must be repressed."(274)

Standards change from culture to culture..."But Dr. Montessori does not hesitate to suppress...anything that she thinks they [the children] ought not to do; the rigour, indeed, only relates to the result; her methods of suppressing them are clearly based on loving sympathy and on reverence for the child; and, as always, the ways of children so treated are charming."(275)

MaClear: "While we are to repress anti-social activities we are to do so with as little conflict as possible between the child's will and our will. In order words one important part of education consists in correcting mistakes made by the children. But in doing this, there should be as little exertion of authority as possible."(276)

Related to Montessori's attempt to maintain only the essential limits and rules was the innovative and effective use of 'separation from the group' and 'inactivity' as the means of punishing behavior deemed inappropriate:

Kramer: "The only punishment for misbehavior was inactivity--given nothing to do. The obstreperous child was treated like a sick child and isolted. He soon recovered."(277)

Bailey: "In place of the reproof that he almost longed for {and was used to at home} that he might meet it with rebellion, he felt the touch of warm lips on his forehead, and he heard the soft voice of the directress: 'Ah, Otello, that was WRONG.' There was no other word of blame, no command YOU MUST NOT..."(278)

"And, best of all, the children were GOOD together. If one child did anything that interfered with the rights of the others he was kindly but effectually isolated. He was denied nothing save his privilege of being an active, happy member of the child republic. To be allowed to go back to it was his ultimate joy."(279)

As is true of so many of Montessori's other concepts, the ideal of appreciation for the collective interests of the group is related to Montessori's concept of discipline. Discipline is an essential ingredient in allowing the child to appreciate the rights of others, but it is not a traditional concept of discipline. I'm going to take advantage of a wonderful series of comments made by Bertrand Russell in his book EDUCATION AND THE GOOD LIFE, in which he provided a very sensitive understanding of Montessori's concept of discipline: "I had always understood that Madame Montessori dispensed with discipline, and I had wondered how she managed a roomful of children. On reading her own account of her methods, I found that discipline still held an important place, and that there was no attempt to dispense with it. On sending my little boy of 3 to spend his mornings in a Montessori school, I found that he quickly became a more disciplined human being, and that he cheerfully acquiesced in the rules of the school, but he had no feeling whatever of external compulsion; the rules were like the rules of a game and you obeyed as a means of enjoyment. The old idea was that children could not possibly wish to learn, and could only be compelled to learn by terror. It has been found that this was entirely due to lack of skill and pedagogy. By dividing what has to be learned -- for instance, reading and writing -- into suitable stages, every stage can be made agreeable to the average child. And when the children are doing what they like, there is, of course, no reason for external discipline. A few simple rules -- no child must interfere with another child, no child must have more than one sort of apparatus at a time -- are easily apprehended and felt to be reasonable, so that there is no difficulty getting them observed. The child thus acquires self-discipline, which consists partly of good habits, partly of the realization, in concrete instances, that it is sometimes worthwhile to resist an impulse for the sake of some ultimate gain. Everybody has always known that it is easy to obtain this self- discipline in games, but no one had supposed that the acquisition of knowledge could be made sufficiently interesting to bring the same motives into operation. We now know that this is possible, and it will come to be done not only in the education of infants, but at all stages ... the fundamental idea is simple: that the right discipline consists, not in external compulsion, but in habits of mind which lead spontaneously to desireable rather than undesireable activities. What is astonishing is the great success in finding technical methods of embodying this idea in education. For this, Madame Montessori deserves the highest praise."(280)

For many of her interpreters, Montessori's learning environment was uniquely designed to provide a true means for discipline. It was a revolutionary concept in her day and accentuated the active rather than the passive elements of learning. Theodate Smith commented, "A child who has been reduced to silence and immobility, who does only what he is told to do, is a paralyzed, not a disciplined child."(281) It is only through the achievement of self-discipline that a child can reach inside herself or himself to find inner freedom. As adults, we recognize that forms of self-discipline provide us with access to inner levels not readily apparent otherwise. Montessori defined this accessiblity as the key to the self, the core being which can direct us -- if we learn to be sensitive to it -- toward a meaningful, happy existence. This is the inner freedom, a means and an end, that Montessori desired for each child: the basic requisite for maximizing growth and development, and achieving one's potential. This desire for achieving one's greatest potential was never to be confused with obvious achievement in the traditional academic-accomplishment sense, though in her experience academic excellence was frequently a natural by-product in self-fulfilled children.

Nancy Rambusch provided some insight here: "The key to the Montessori classroom's flexibility is to be found in the notion of self-discipline which informs it. Despite the fond hopes of teachers to evolve a system of teaching which is most respectful of the individual, the lack of education of the child to his individual responsiblities to himself and to the group makes this virtually impossible, and the group becomes one more reflection of the teacher's capacity to inspire obedience and assent through her own personality, rather than through the aggregate of the individual wills of the children."(282) Standing quoted Montessori: "It was the children who taught us something very important -- that freedom and discipline" {self-discipline, not externally imposed discipline}, "are two things that always go together; in fact they are aspects of the same thing."(283) This self-discipline reflects the development of the child's will .

Just as the classroom requires structure and control in order to allow physical freedom, self-discipline is the skeleton by which the child's internal freedom can meet fruition. Ellison pointed out that Montessori's ideal for self-discipline connoted far-reaching philosophical concepts which ranged far beyond what was traditionally considered to be self-discipline: it included self-assurance, self-command, self-confidence, self-control, self-possesion, self-reliance, self-respect, self-restraint, self-sufficiency and self-mastery which together would lead to solf-hood.(284) Ellison quoted Montessori's definition of discipline in THE MONTESSORI METHOD, (apparently an edition other than that I use): "We call an individual disciplined when he is master of himself, and can, therefore, regulate his own conduct when it should be necessary to follow some rule of life.'"(285)

The essence of freedom in Montessori's term then requires this self-discipline, self-direction, control over oneself. Understanding how this is to come about requires our explanation of Montessori's interpretation of obedience and the will, and how they relate to freedom and discipline in the classroom. Montessori explained that there are "three stages in the development of a child's capacity to perform an operation. First, a subconscious one, in which the child, by groping simply, succeeds in doing a thing, but cannot reproduce it at will -- a stage readily observed in all baby efforts; second, a conscious state, when the child can voluntarily reproduce an act when he tries by himself or under favorable circumstances, but makes mistakes if asked to do it, not yet having complete control of the necessary mechanisms [physical and mental control]; and, lastly, the complete mastery of the act which enables the child to voluntarily respond to command."(286) Montessori observed that to obey fully requires of the child both the desire and the ability.(287) Accordingly, the first level of obedience exists when a child wants to obey but can't, either physically or because what he wants to do is not entirely within his conscious control and there are other behaviors demanding greater attention. The second level is reached when the child wants to obey and can sometimes. Internal and external conflicts and distractions are successfully held at bay sometimes... The third level is attained when the child wants to obey and can whenever he/she really desires. Achieving this third level is more difficult than it appears on the surface. The conflicts of each successive stage of development challenge each individual. Thus, for one example, a child may seem disciplined at age eight when a sensitivity to morality and goodness combine with a typically secure self-image and seem totally undisciplined at age thirteen when the sensitivities have shifted to intense need for friendship and the sense of self is struggling to be redefined.

Now let's fit this description of the development of the ability to obey (e.g., to be in control of one's will) into the framework of discipline. Montessori stated: "Our aim is to discipline for activity, for work, for good; not for immobility, not for passivity, not for obedience."(288) ... "Nothing is gained by mere imitation or forced obedience; there must be inner preparation by which obedience becomes possible, and such preparation is indirect. Very clearly stands out the necessity for a prepared environment for children, and freedom wherein the soul can expand its powers."(289) The goal in achieving obedience is similar to that of achieving self-discipline: it is a means to an end...a means by which the child can achieve that inner freedom...to be in such control that one's powers "to be" are unlimited. Just as external discipline is of temporary and minimal advantage to this child's development, so too external demands for obedience from adults is of limited value for the child. Thus Jacoby stated: "Will-training is frequently confounded with will-breaking; but just as obstinancy is not evidence of strength of will but, as shown by the inability to govern oneself, is an evidence of weakness of will, so the breaking of a child's will cannot be considered good discipline. True discipline is based upon freedom of action. Only that child is free which, through a strong will, has itself in its own power."(290)

Bailey noted that three elements are necessary in allowing development of the child's will: "First, we must give our children as wide and free an opportunity as possible to be active, especially with their hands, along those lines which will lead to muscular control. Second, we must not interfere with a little child's concentrated occupation through play. Last, whatever task we set for him to do, we must outline a right way in which it should be accomplished and encourage him to correct his own errors in it."(291) Bailey is pointing out several important elements which relate to this goal of the child's development of his own will. One, which has not been addressed before, is the importance of the design of the Montessori material environment as a major source for correction, and the importance of this correction in the development of the child's will. This does not imply that there is only one acceptable way to engage in an activity. It does suggest that the child needs the opportunity to reach within himself in the process of becoming more and more conscious of his own discriminating, cognitive faculties in order to determine what is the right way of doing a particular exercise or how one should go about accomplishing a specific task. The reasoning, thinking skills are required of the child because that is the challenge inherent in the task. The teacher is there only as a guide, a catalyst. Providing correction from adults is almost impossible without incumbering it with the message of failure and frustration, in addition to encouraging thoughtless activity. From within the Montessori materials a challenge is creatad rather than a demand made. The materials are designed to show specific features and work in specific ways when a child is ready to perceive them.

What is the process, then, of this developing will within the classroom? Said Smith: "The first dawning of real discipline, according to Dr. Montossori, comes through work. When a child first becomes absorbed in doing something, whether it be one of the exercises in sense training or learning to lace, or button, to to set the table, he has taken his first step on the road of discipline. Every time a child completes a series of coordinated actions directed toward a given end, every time he repeats his exercises, correcting his own errors every time he accomplished something which he has undertaken, he is training his positive will-power."(292) Sir Thomas Percy Nunn [EDUCATION: ITS DATA AND FIRST PRINCIPLES] agreed that Dr. Montessori was right "in maintaining that to train a child's will we must begin by leaving him free to work out his own impulses."(293) Nunn went on to explain why: "for if he is constantly checked or constantly acts only on the directions of another, there can be no building up of strong sentiments to be the basis of effective and well-regulated conduct. His earlier sentiments will be choked with inhibitions preventing natural action ... thus we shall produce in the end a man who has never learned to act from a wide and firmly organized inner base."(294) This idea is very much in line with Montessori's--that is, the idea that obedience and discipline as internal functions empower the individual rather than inhibit. Once again, we see something of the structure Montessori recognized as being essential to creation of an adult who is capable of acting and interacting as a responsible human being. Each activity and set of materials is degined to encourage this. Thus, Robert Rusk in his book DOCTRINES OF THE GREAT EDUCATORS approvingly quoted Herbart's TEXTBOOK OF PSYCHOLOGY: "When the environment is so planned that childish activity is directed along the lines of the useful and expends itself thus, the result is the most effective form of discipline."(295)

I take the term "useful" to mean "purposeful" or meaningful" vs. the typical busywork activities found in classrooms which fail to challenge the child's developing self physically or mentally. It is with caution that I use the term "purposeful" and interpret Herbart's term "useful." There is room for error here in assuming that Herbart agreed with Montessori's definition of "purposeful," which takes into account the internal developmental tasks of the individual child far more than the overt, external goals. Montessori observed the child's desire to be able to accomplish tasks independently and noted how much more motivated most children were when challenged by tasks they felt were "useful." Thus, comes great satisfaction from achievement which the child sees as meaningful. Though the youngest child, ages one to three/four, experience great satisfaction in the pure physical experiences involved in activity, with little concern for the value of the task, the older children, typically beginning around three or three and one-half years, become quite energized by specific purposes which they create in their own imaginations or which, by age five, they recognize as being a socially valuable task.

It is appropriate now to add one more of Montessori's concepts, that of "concentration," and see how it interrelates with what we have discussed so far. A child's ability to concentrate is, noted Montessori, "The first essential for the child's development ... it lays the whole basis for his character and social behavior. He must find out how to concentrate, and for this he needs things to concentrate on."(296) A child needs to be able to concentrate before he can draw from any of the resources which are offered to him by his prepared environment, including the teacher. Boyd explained Montessori well concerning this point: "The interest the children take in their work leads them to concentrate on what they are doing, and they come to control themselves as they would never do if they were compelled to learn what they did not want to learn. The practice of fixing attention on congenial occupations and resisting the temptation to turn aside to other things produces in course of time, the habit of self-control."(297) Here we can begin to get an idea of how these essential concepts of self-control, freedom, obedience, and concentration work together to allow the child progressive development. In a lecture Montessori gave to a group of teachers in 1925 in London, she said: "Through our efforts we shall have led the child to movement and to refinement of sense and discrimination and this power will lead him finally to distinguish colors [for example] which he could not do at the beginning, and during this period we must be careful not to interrupt him. By leaving the little individuality we imply liberty for his interests, freedom for spontaneous movement with the objects; these are very delicate in the life of the child and it is only the intelligent teacher who will recognize them. The phenomenon of concentration and repetition is sacred and must not be interrupted."(298)

Culverwell contrasted Montessori's environment with the traditional one: "Time after time has the writer seen those in charge of babies or young children 'keep them amused' by giving them one toy after another in quick succession. As soon as any sign of lack of interest appears, the occupation is changed. These good people do not seem to realize that this is exactly the course by which we should train children to inattention; to want change, to be easily distracted or, in other words, to be creatures of their environment; to be without self-control and incapable of persevering at anything."(299) Pauline Foster, in her dissertation, "Montessori: How and Why It Works," observed: "No child who is constantly concerned with the activities of others, who is in constant competition with others, who quarrels, snatches and hits, can possibly concentrate upon himself and his own needs...the child does not gain any feeling for self, does not know the joy of accomplishing a task, cannot feel the happiness inherent in a job well-done."(300) Both of these comments reflect positively upon the power which the child gains in learning to concentrate and of developing self-discipline. It is through these two elements combined with a prepared environment in which the child is physically and mentally free to explore and discover which allows the child to continue along a path of personal development. This attainment amounts to the inner freedom of which Montessori was often speaking. Stevens noted: "Self-control, liberty through law, poise, discipline activity, self-reliance, respect for collective order, for the rights of others, hospitality, courtesy, kindliness; these and other moral qualities are to be found, I have seen, in children brought up in the atmosphere of freedom which a Montessori school creates. These are positive qualities coming from opportunity for self-expression, rather than negative ones arising from that self-repression and timidity, which, owing to a false code of etiquette ... was more characteristic in days gone by."(301) Stevens provided a good conclusion here: "It is that joy in life that comes from mastery of self, and therefore perfect freedom that should come to each child."(302)

Having dealt more fully with Montessori's purposes of education and delved into her concept of the planes of development, we should have no more trouble with Boyd's criticism: "It is not enough...to say that education should have freedom as its condition and independence as its goal. That does not tell us what education itself is. For that we must have some positive idea either of the process of growth in the child or of the ultimate aim in terms of adult life."(303)

Out of all of the criticisms noted in this section, which have been related to issues surrounding "freedom" and "dependence," one concern which stands out is made by Culverwell: "The real question remains untouched -- namely, whether the child is best educated by doing what he chooses, or what a wise guardian ordains."(272) This is truly a debatable point, but it is not in conflict with Montessori. Montessori's entire prepared environment, including the teacher's sensitive ability to guide and direct when necessary, and the materials which challenge and stimulate, are to serve as a composite quardian. This composite guardian rather than some ultimate authority encourages children to learn to make responsible choices leading to the most positive and meaningful self-education. Thus, Montessori education does not abdicate responsibility for learning. Nor does it eliminate the role of the educator. It does recognize that the learner is the essential determinant for what will be learned, however, and tries to create the most positive partnership possible. Hopefully, this will result in each individual child's ability to take responsibility for one's own education.

3.2.4 Needs of the Child

Drawing from her medical education and studies in anthropology, as well as her years of observing children, Montessori came up with a list of needs and tendencies of children. It was through the understanding of these needs and tendencies that she created an environment which would provide for them, and it is only through the understanding of these needs and tendencies that the individual teacher would be able to provide a proper learning environment for young children. Below is a brief list I have compiled from a variety of Montessori sources:

Needs:

- food
- shelter, clothing,
- work
- self-perfection via: activity
  - work
  - manipulation
  - movement
  - experience
- spontaneous activity, to work with hands; to be provided with control of error, (for development and growth of intelligence through free activity)
- exactness, so that what was made responds to its purpose (e.g., learning materials)
- language
- order
- reality
- silence
- self-discipline
- independence
- love and security
- means of self-expression (i.e. through art, music, sculpture, etc.)
- unity of personality (body and mind working effectively together)
- social existence
- self-confidence
- self-valorization; self-valuing
- adaptation
- concentration

Tendencies:

- to observe and to abstract
- imagination, to create
- mathematical mind, logical ordering, classifying of world
- to repeat activities
- to attempt to perfect self
- self-control, related to the "will" and "obedience"
- freedom

I will not try to indicate how Montessori provides for each of these needs and tendencies in the classroom. Much of this should have become clear by now or will become more clear by the end of this survey; but I will point out now the way in which the environment provides for "order," because this is the foundation of support which allows the child to experience freedom within the learning environment. This is, in effect, the structure of the classroom, the internal skeleton which offers control and opportunity for expansive movement, growth and development.

Salzmann noted: "Like Montessori, Chukovsky observed that 'Anarchy is unbearable to the mind of a child. He believes that there are laws and rules everywhere and he yearns passionately to discover them; he is disturbed by... unexpected discrepancy.'"(305) Montessori felt that this need for order is reflected by the young child's need to be grounded in reality; order provides for the child means for growth and development and the refining of perception so that the child can organize the environment in a meaningful way.

The Houston Montessori Center offers a list of features regarding "order" and indicates how it is provided for in the Montessori setting:

ORDER AIDS DEVELOPMENT:

a. Intellectual
   - discrimination
   - arranging things in sequence
   - progression of activities
   - concept formation
   - perception formation
   - abstractions
   - comparisons and contrasts
   - varies
   - classifying, combining knowledge
   - cause and effect

b. Physical
   - free movement
   - place for muscle control
   - for coordination
   - sense perception
   - coordination among the senses

c. Psychological
   - security, success before failure
   - child would reject if he was led into confusion
   - frees the child to learn
   - facilitates learning
   - frees from frustrations
   - frees the child of the adult
   - aids independence
   - atmosphere conducive to emotional stability

Order within the Montessori Setting

a. order in the structure of the room
b. presentation of the materials
c. design of the materials
d. progression of activities
e. order in the cycle of activity
f. gradation from the simple to the complex
g. creativity of the child finds expression in order
h. facilitates inward order
i. enhances the normalization process
j. the child finds consistency in order
k. through order the child finds self-attainment

l. the teacher maintains the order for the enrichment of and the freedom of the child through her consistent behavior
m. order is found in the ground rules
n. order is produced through the daily living activities
o. the order of creation in the outside environment. (306)

The reader should keep in mind that Montessori's creation and organization of the learning environment, including specific learning materials, was in response to this list of needs and tendencies. The functioning of the teacher required/requires a sensitivity and ability to respond appropriately to these needs and tendencies within each child. It is the order of the classroom that makes it humanly possible.

3.2.5 Creativity, Imagination, Intelligence

The general impression of educators concerning Montessori's attitudes about imagination is based upon a significantly different perception of creativity than that Montessori had in mind. Earlier, I have noted some of the critic's perceptions that Montessori had limited the variety and scope for the use of materials. The general impression was that the Montessori materials in an environment so structured and controlled did not permit the child to create. I have already shown that this notion of "oppressive structure" is an inaccurate foundation for understanding the functioning of the materials in the classroom. In this section we will explore Montessori's contention that, rather than inhibiting creativity, the materials in her classroom were a basis for creativity.

Joy Turner, a Montessori educator in America, expressed everyone's concern for the impression which Montessori left in the minds of some critics: "Although we are tempted by the idea of the disappearance of untidyness, disobedience, sloth, greed, egoism, quarrelsomeness, instability, submissiveness, inconstancy, and wavering attention, the thought of being part of a process which might cause a child to lose her creative imagination, delight in stories, attachment to individuals, ability to play, and curiosity -- this must certainly strike an icicle into the heart of even the least humanistically oriented teacher."(307) While the majority of early childhood educators assumed that the basis for creativity lay in arts and crafts, Montessori saw the matter as much more complex. It is particularly necessary to grasp her sense of creativity as it relates to the development of intelligence, of the reasoning process by which children learn to think. Michael Berliner, in an article entitled "Reason, Creativity, and Freedom in Montessori," explains: "For Montessori, both creativity and freedom are considered to be the consequences of cognitive development, of increased rationality. The creative process is cognitive, not mystical, and is dependent upon knowledge and the ability to view reality rationally."(308)

Michael Berliner noted, "It would be difficult to overestimate the importance Montessori attaches to intelligence on rationality, which means for her, the ability to categorize, abstract, and judge."(309) This reasoning process "is basically a process of forming concepts out of the raw materials of sensory perceptions. Montessori's sensory materials focus on developing the ability to notice similarities and differences in quantity and quality, and thus to come to view things as members of a group of similar things."(310) Montessori herself noted succinctly: "To be able to distinguish is the characteristic sign of intelligence."(311) Berliner thus correctly relates that "There can be no doubt that for Montessori, there are correct and incorrect ways to think. Some methods lead to error, some to truth. If one uses one's mind properly he will attain independence and self-control, and prevent himself from being a victim of chance and circumstances."(312) Montessori drew some of her ideas from the philosopher Bain, particularly his view about the ability to distinguish; thus she stated: "The consciousness of difference is the beginning of every intellectual exercise: the first step of the mind is appreciation of 'distinction.' The bases of its perceptive functions toward the external world are the 'sensations.' To collect facts and distinguish between them is the initial process in intellectual construction."(313) Though there are other important elements which indicate signs and levels of intelligence, such as signs of stimulation and spontaneity, imagination, flexibility of ordering and self-expression, Montessori saw these occuring after the rudimentary appearance of consciousness.

Berliner commented: "Montessori advocates creativity and freedom but views each as a consequence of rationality. Montessori's method is, in fact, based on the principle that without the order and structure necessitated by rationality, there is no true creativity or freedom."(314) ... "The process of reasoning is the gradual development from the concrete to the abstract."(315) In this regard Karen Salzmann quoted notes from an unpublished lecture given by Maria Montessori in London, 1946: "Imagination and abstraction are vital factors in the construction of the intelligence. Montessori insists that the construction of the intelligence is not a passive occurrence: 'You must not think that the intelligence develops because of the passive help you give. You must realize that at every point something is being created interiorly. We must not just think of a receptive mind, but a creative and a constructive mind. We cannot help by merely imparting knowledge, but by giving those aids which are a help to the laws of growth."(316)

Why then, were/are educators so alarmed by Montessori's purposes, assuming them to be in direct opposition with the goals of creativity? David Kahn, in an article called "The Case For Montessori Creativity" explained it this way: "A spector is haunting the Montessori image -- the spector of structure. Certainly the 'stereotyped creative bohemian' finds structure an 'ugly inhibitor.'

'I create what I feel,' indeed is a caracature of how so many open classroom educators saw creative learning -- permissive, unstructured, and purely spontaneous. Over the last twenty years many critics have assailed Montessori as lockstep, tied to the right ways of using the materials, stifling discovery and imagination."(317) We have already examined Montessori's purposes in freeing the child through structure, a concept profoundly misunderstood and unappreciated by her critics. Kahn referred to Bruner who was in agreement with Montessori on this level: "When Bruner speaks of exciting sequences that lead a student to discover for himself, he means precisely that the conditions for discovery can be accomplished through structure. Structure does not teach creativity, but rather produces an occasion, a place for the creative event to happen by itself."(318)

To begin to understand Montessori's perception of imagination, we must understand her notion: that the building blocks for creativity are grounded in reality. This means that the child, through the process of developing his intelligence, via examination of the child's environment, learns to discriminate and reason, and that from these perceptions the child has the bits from which he or she can construct something new. This creative product may not be novel to the world but it is a new construction to the creator. Montessori explained: "No one can say that man creates artistic products out of nothing. What is called creation is in reality a composition, a construction raised upon a primitive material of the mind, which must be collected from the environment by means of the senses. This is the general principle summed up in the ancient Latin axiom: Nihil est in intellectu quod prius non fuerit in sense (There is nothing in the intellect which was not first in the senses)."(319) Another quote from Montessori's lecture in London: "Whether its activity is conscious or subconscious, imagination is absolutely rooted in our perception and experience of reality. We cannot imagine a color we have never seen, or an emotion we have never felt."(320) Accordingly, Berliner helps to explicate Montessori's definition of creativity: "The function of reason is to 'make connections' in what one perceives, creativity amounts to making new connections. It is a cognitive process based on recognizing reality, as opposed to fantasizing or pretending."(321)

Creativity is not necessarily in opposition to fantasy. Montessori was frustrated by the traditional educational assumption that creativity was encouraged by and a product of pure fantasy. She emphasized that fantasy needed to be grounded in reality; that creativity is mindful of the distinction between fantasy and reality; that the young child needs assistance in making these distinctions. Berliner noted: "Montessori's views provide a clear response to the charge that rationality and objectivity are antithetical to creativity." Based upon Montessori's concept that cognition is the foundation for creativity through the development of cognitive habits (of perceiving discriminating, reasoning logically), allowing the child to make new connections ... "it is not information but the 'ability to think properly' that Montessori stresses as the foundation of creativity. Consequently, the way to aid creativity is not to give the child a problem to try to solve 'on his own' through trial and error, or to give him art materials to arrange at will, but rather to prepare his mind."(322) This does not mean Montessori did not believe in a young child's learning to solve his or her own problems, but she felt a child did not learn to do that without the foundations for analyzing logically and being able to discriminate between what is real and what is not real. The child certainly has fantasies and sometimes needs to "play" or "work" them out, but needs to know that "it is not real."

To Montessori, then, the foundation necessary for creativity was the capacity to think: to discriminate, to organize, to reason, to know what is real and what is not real, and to be able to draw from inner resources, including one's fantasies. Arts and crafts is one medium for the expression of creative thought and should be included in the classroom.

It is from this perspective that Montessori is extremely careful in her desire to discourage fantasy and the use of fairy tales with very young children. Through her observations she concluded that a child before the age of six or seven was not yet capable of fully distinguishing between those things which are real and those which are not. The first plane of development is one in which the child is examining the environment for clues as to what is real, but in large part is not capable of determining this. Thus, the preschool child must rely heavily on the knowledge of adults for these distinctions. Montessori noted of the young child: "It is we [adults] who imagine, not they; they believe, they do not imagine."(323) It is this sense of credulity which Montessori felt was being encouraged in the traditional classrooms through the constant use and encouragement of fantasies and fairy tales. It was quite clear to Montessori that credulity was not what she wished to develop in children: "Credulity may exist in adults; but it exists in contrast with intelligence," and credulity is not the basis for intelligence.(324) But Montessori was not opposed to the use of fairy tales entirely. Karen Salzmann noted from Montessori's lecture that Montessori saw the use of fairy tales as one valid and important aspect of literature for young children. "She was opposed to the use of fantasy to manipulate children especially by establishing fantastic fears. And she felt ... that it was wrong to misrepresent reality [at an age when children are unable to distinguish stories which are expressing reality and those which are not] to a child who trusts and depends upon adults [for his concepts of reality]."(325) Salzmann went on to note: "Montessori found that little children abandoned interest in fairy tales as they normalized through 'real work' — just as they abandoned toys."(326) We must carefully examine what tales and what toys were abandoned, of course, before being able to accept this statement without suspect. Montessori's intention was to point out two things: 1) how much children desired meaningful activity and, 2) how terrible the quality of play materials available to these children was at that time.

We may still have some difficulty fully agreeing with aspects of Montessori's approach to fantasy in the classroom. For the most part, she seemed to prefer leaving the realm of make-believe and fantasies in the home. My impression is that Montessori felt that classroom time and attention directed toward fantasies sidetracked more essential educational pursuits. Rita Kramer quoted THE TIMES EDUCATIONAL SUPPLEMENT in London from December 18th, 1919: Montessori "spoke to the Child Study Society on children's imagination and fairy tales, hoping to clear up once and for all the question of her attitude toward fantasy, explaining that she was not antagonistic to it, but found it irrelevent to education, in which the child is 'engaged in immense work — the work of self-organisation and self-discipline' in which he needs all the help adults can give him in 'forming his critical and discriminating faculties in distinguishing between the real and the imaginery."(327)

On a different level Robert Rusk noted: "This rejection [of fairy tales] is likewise but a corollery to her general principle of auto-education, for the introduction of the fairy tale demands the presence of the teacher."(328) Bruno Bettleheim, in his book THE USES OF ENCHANTMENT also emphasized that fantasy stories must be individualised to the capacities of the individuals hearing the stories in order to be valuable; that they should not be read, but should be oral stories that can be adapted to the children's questions, interests, and comprehension levels.(329) Bettleheim also appreciated the value of this fantasy for the older child, that its value as entertainment and help in finding the meaning in life was of use for a child who could already distinguish between reality and fantasy. Lili Roubiczek Peller and Anna Freud seemed to feel the Montessori environment offered ripe opportunity for children to explore and express their personal needs and fantasies but it is not clear to me how much of this Montessori appreciated or envisioned.

There is room for the critics' concerns that important feelings may have been suppressed or denied by the limited contact with fantasy in the Montessori environment. On this level the writings of Montessori are not complete. I feel certain Montessori recognised the need for teachers to he sensitive to and respond to the fantasies which children have. Montessori seemed much more concerned about the extreme and impersonal use of fantasy by teachers potentially leading to psychoses rather than the normal expressions and experiences of childhood fantasies offering the child the opportunities to sort out and distinguish what is real from what is not.

Montessori provided an intriguing statement in her book, TO EDUCATE THE HUMAN POTENTIAL. "Human consciousness comes into the world as a flaming ball of imagination. Everything invented by man, physical or mental, is the fruit of someone's imagination."(330) If we combine this concept with our awareness of Montessori's definition of the first plane of development where the child is moving through a process from his unconscious state creating his conscious being, we begin to see a more complete picture of how Montessori defines "imagination." Each new connection the young child makes is a result of this blossoming process of the developing imagination. Upon each new bit of information, the ability to connect that piece of information with another one and to draw a new conclusion, an impression of what reality is or is not, the child is drawing upon his ability to imagine. The aim of education, therefore, is not "to know" details (which Kilpatrick so explicitly maintained), but rather "to make the child understand...to so touch his imagination as to enthuse him to his inmost core."(331) As opposed to offering fairy tales in order to strike the imagination, Montessori suggested that offering the child the story of the universe would be more fruitful: "We give him something a thousand times more infinite and mysterious to reconstruct with his imagination, a drama no fable can reveal. If the imagination be educated merely by fairy tales, at most the pleasure it gives will be continued later in the reading of novels, but we should never so limit its education."(332)

Montessori wanted to provide an environment in which the physical freedom was only the means toward that deeper freedom, something that is simply not possible by sectioning out a particular arts and crafts activity as the means for developing "creativity" while reading and writing activities are designated for intellectual development. We can see from these explanations that Montessori's ideas are completely integrated, just as the child is meant to be. Montessori felt it was futile to try to segment an educational program into false compartments. She wrote: "Educationists, in general, agree that imagination is important, but they would have it cultivated as separate from intelligence, just as they would separate the latter from the activity of the hand. They are the vivesectionists of the human personality. In the school, they want children to learn dry facts of reality, while their imagination is cultivated by fairy tales, concerned with a world that is certainly full of marvels, but not the world around them in which they live."(333)

Montessori's concern for providing a learning environment which offered contact with real life, her desire to minimize emphasis on fairy tales, and her extremely well-ordered structuring of materials combine to leave the impression that she felt good education had to be useful, in an adult sense. This 18th century "enlightenment" view differed from Montessori in significant ways, however. We must be reminded that Montessori's first dictum was to observe and meet the needs of each child. Materials, stories etc., were valuable only if they were attractive to and used by the children. Designing a curriculum came after intensive and extensive observation and experimentation--and though a general curriculum resulted to ease the way for teachers, nothing in the materials or system was to be considered sacred in and of itself. Flexibility, the sensitivity to perceive the different and changing interests and needs of children, and the ability to adapt or create anew according to these interests and needs are the keys to Montessori education. This message easily gets lost as we try to pick out particular quotes which address particular questions.

Salzman wrote: "One of Montessori's great contributions was her observation that imagination (activity with real images) also is related to emotional development. The child, indirectly helped to form clear images of reality, becomes 'normalized,' that is, appears to have an integrated personality. The more a child attaches to reality, (the clearer his images and hence his intellect), the less anxious he is, and the less need he has for fantasy."(334) Montessori said: "Fantasy is alway associated with emotional development. All interaction with the environment is charged with feeling and for the child feelings often are unnamed and powerful. When emotions and wishes engulf him fantasy becomes a raft: he may safely cling to it, or sail it in unchartered waters. But for a normal child the raft must be completely of his own design, and he must summon it himself according to his own needs. His fantasies, like his dreams, are his own. Just as we cannot teach directly, we cannot interfere directly with a child's uses of imagination and fantasy, his personal construction of reality. The urge to know life is strong and must be respected."(334--same reference above) Montessori appreciated the child's needs for fantasy. But she felt that the needs for the child which could be best provided for in the classroom were those rooted in reality, a reality which allows the child to construct himself according to his own interpretations of himself within a real world.

Montessori built this recognition into her system of education so thoroughly and implicitly that to answer the critics question, "What is in the Montessori environment which allows for the creativity of the child?" she would have to respond "Every single element." To go back now and try to detail particular responses to criticisms about creativity should be unnecessary. We get support from Dewey who appreciated some of the imaginative elements of the Montessori classroom. In reply to the criticism that domestic and household work makes children prosaic and destroys spontaneity, Dewey said that he did not find dishwashing unimaginative and prosaic for he had done it. "I think children get a cultivation of imagination in dishwashing. It is the child who is poetic and artistic, and puts this into his work if we give him freedom of action."(335) |This particular article was written by an unidentified author who was transcribing a speech of Dewey's given in 1899.| Margot Waltuch responded to my question about Montessori providing for the creative needs of the child in this way: 'A child is never kept from drawing, molding, from any means of self-expression...but what the child continually shows us is his interest and need to construct himself--to explore, develop, etc...when the child is given a choice the child chooses what Montessori calls 'work.'(336) Justifiably, some are wary of this term "work" as it implies activities which are limited by an adult's sense of value and usefulness in preparing a child for meaningful adult life. As noted in Section 3.2.8, Montessori did not distinguish "play" from "work" in this way. The important point here is that the child should be given the choice.

Though we will examine this question a bit more as it relates to didactic materials in 3.2.7 [because these materials were seen as the most limiting to the child's creative development] Berliner offers a perspective that is related here in reference to the criticisms that Montessori's attitude about "correct use of the materials" inhibits creativity: "Knowledge of the world as it is, far from inhibiting creativity, is essential to it. 'Correctness' in how one uses one's mind does not stifle creativity."(337) And it is not knowledge per se, but learning how to use one's mind, which is the power we give to the child by providing an environment in which the child learns to observe, to discriminate, to analyze, and draw conclusions, the development of reasoning, learning to think, are the gifts of this classroom, not a set curriculum of information. Berliner provides us a very rich image when he says "It is the difference between an 'explorer' and a 'wanderer' that provides the basis for understanding both creativity and freedom for Montessori."(338) One concluding statement on this point from Montessori: "When man loses himself in mere speculation, his environment will remain unchanged. But when imagination starts from contact with reality, thought begins to construct work by means of which the external world can become transformed: almost as if the thought of man had assumed a marvelous power: the power to create."(339) Again, this may sound very goal oriented. The key once again lies in the source of the motivation and the capacity of the motivated rather than any particular achievement.

Critics also raised the concern that the teaching of specific skills at the preschool level automatically inhibited creativity by providing specific impressions of how to go about doing things. Lacking an understanding of the role of basic skills as a foundation which empowers rather than inhibits, combined with an inability or unwillingness to perceive value in structure and order directed to the same purpose, the American critics concluded that Montessori was too rigid and dogmatic a pedagogy to be of value. Emma Plank, in her article, "Reflections on the Revival of the Montessori Method," countered this attitude about learning skills with this: "Creativity is not stopped if children have skills. For instance, painting becomes more meaningful if children know how to use a brush without dripping. There are some children who can only be creative if they are sure of a technique. Therefore, the teaching of skills, when children reach out for them spontaneously may lead to creativity and not away from it."(340)

It must be clear by now how much sensitive comprehension is required of the individual teacher. The balance between providing for basic skill attainment and the child's need to explore freely, directed by inner drives and interests which naturally motivate activity (sometimes demanding sensitive and cautious assistance and sometimes requiring a willingness to let the child encounter challenges knowing the basic skills needed in the task are lacking) is an extremely difficult one to maintain. But failure to achieve this balance can result in disinterest and frustration, if not outright antagonism directed toward the authority figure who interferes with self-directed exploration.

The criticisms which seemed so simplistic on an arts and crafts level now must still challenge us to examine whether Montessori's concept of creativity and imagination is complete or correct. While it is clear Montessori was not suggesting the complete elimination of fantasy and that she intended that her learning environments include all manner of arts and crafts, it remains unclear where her appreciation of children's personal fantasies lay. On this level the Montessori learning environment can provide open opportunity for expression even if Maria did not fully encourage and/or enhance its experience.

3.2.6 Social Development, Individual Work Emphasis vs. Group Instruction

The theoretical discussion which has gone before should provide enough of a foundation for easily exploring the question of individual vs. group emphasis. It is now possible to appreciate how completely distorted a picture Morgan and Kilpatrick and Boyd created when they tried to suggest that Montessori was denying the social needs of the child and rejecting social opportunities because she favored an individual work emphasis. Montessori had observed that the young child, aged 2 to 4 years, almost always chose to work alone. The child was observed working side-by-side with another child, but usually the specific activity in which that child engaged was one directed toward individual interests.(341) We know that Montessori recognized that children function on two levels: biological and social. But now we can appreciate why her emphasis was on the individual during this first plane of development. In order to meet those developmental needs of the first period, while the child is intensely involved with the construction of his own internal order, where the child is frequently not even aware of anything other than that in which his/her own ego is focused, we can easily see that Montessori's emphasis on the individual child's exploring materials which were helping to form his or her personal skills was limited only in that the individual child truly needed it. The classroom that Montessori proposed had a built-in flexibility which would allow the child to determine when he or she was ready to move out into social groups.

Montessori observed that, in striking contrast to the two to four year-old child, the four to six year-old made a social activity out of everything he/she did in the classroom. She felt that the environment of freedom to choose whichever social setting [individual, small group, etc.] was desired completely eliminated any need to force either individual or group opportunities.(342) The Montessori classroom offers a whole variety of social settings, not forced social groupings determined by a teacher, but natural groupings which accompany normal, ongoing activities in the classroom. In this respect, the Montessori classrom is especially plentiful, because the classroom offers so many areas to encourage social gatherings and cooperative activities as an essential feature of the children's directing their own activities in the classroom. Preparing snack is one activity which enables two or three children to work together, or preparing and serving a meal together, or exercising the freedom to help each other. Likewise a child may read to some other children spontaneously, or join in caring for animals in the classroom.

The many interpreters who were able to observe the actual classroom came out with an accurate Montessori perspective on groups:

- H.W. Holmes: "The Montessori program involves much direct social experience, both in the general life of the school and in the manual work done by the pupils ... the groupings of the Montessori children are largely free and unregulated; the grouping of kindergarten children are more often formal and prescribed."(343)

- Ward: "The only groupings are the natural ones, formed by the children themselves, because of their mutual tastes and present interests. There is not that unnatural quiet of suppressed, inactive children, so often felt in a schoolroom."(344) "To observe so many children with such a degree of self-mastery and composure is provocative of thought. Just what is the secret of this atmosphere of calm? Is it the didactic material, the teacher's personality or the Italian temperament? Are the children old beyond their years and are they losing something of their babyhood? They do not seem to be; they are all quite childishly joyous and happy; and while the teacher is alert, intelligent and sympathetic, it cannot be her influence alone. Are these self-contained, energetic little beings a bit unsocial? Except for an occasional group of dark heads seen together, each child works by himself. It is not long, however, before one is convinced that the child's love of comradeship and play are not lost sight of as evidenced by the buoyancy and freedom of both children and directress..."(345)

- Bailey: "As one watched the phenomenon of this natural unfolding of the social instinct [in the Montessori] method, there were daily examples of its spontaneity. The children form a collection of units, some large, some small, but all cooperative."(346) "The Montessori house of children is a place of more unusual development of group activities among little children than we have realized. There is a larger opportunity for making children into little citizens than in almost any other scheme of education."(347)

- Michael Gross: "The child does not escape from civilization, but rather engages it."(348)

-Rambusch, noting a significant difference between Montessori and traditional environments: "The impulse to socialiability rather than to 'togetherness' is the governing [impulse] in the Montessori class.(349) "As Piaget after her, Montessori recognized that the young child's unequal struggle for self-affirmation precludes his entering into groups. A child under the age of eight rarely "constellates" in groups larger than three children. The cherished American dictum of the 'felt needs' of the group become meaningless when applied to young children. The 'felt needs' in the classrooms of young children are invariably those of the teachers."(350)

Such observations make it hard to appreciate the criticism that Montessori's individualized work emphases neglected the advantages of group instruction. Montessori did not deny the appropriateness of group instruction for specific lessons and under specific circumstances. But she saw some very important features which must be provided before group instruction is advisable. As Stevens noted: "Dr. Montessori emphasizes over and over again...that before any group work with children, there should come the complete understanding between each individual of the group and its director [teacher] so that each responds."(351) "If we are to have each child benefit by group work, we must first secure his response as an individual, and must be sure that he is in such a state of development that he is able to respond to the social appeal. Natural rather than forced grouping is, therefore, more valuable."(352) According to Berliner, the overriding impression from Montessori is that she observed a normal process of social development within each child and so designed her environment to meet those needs and to provide the options for that development. She concluded that each person should be physically and cognitively independent (353), thereby allowing each person to determine or discover for herself or himself when to be socially dependent.(354)

One of Montessori's basic tenets, never adequately addressed by her critics, is that allowing the individual child to exhibit his/her own interest and determine his/her own level of personal involvement guaranteed the best possible education for that child. No educator is capable of presenting a topic in such a way as to fulfill the learning needs, capacities or interests of a large group of children [or adults, for that matter]. By providing an open learning environment in which all of the children are aware of the opportunities available within the class and can participate when capable and interested, Montessori felt she was insuring the most efficient and beneficial learning environment for all. None of Montessori's critics appeared to understand Montessori well enough to comprehend how an individually-oriented learning environment could possibly be efficient or effective.

Boyd, for example, held that group instruction was necessary to insure that each child within each class received specific, essential instruction. He thought that Montessori neglected the humanities, in part, because group instruction was necessary for their inclusion in any curriculum. Boyd couldn't conceive of a way to insure exposure to them without this teacher-directed group instruction. In addition to failing to recognize that Montessori did, in fact, include the humanities -- to a much greater extent during the elementary program [second plane of development], than during the preschool years -- Boyd never understood Montessori's methods for individual and small group presentations, which were designed to enable the maximum exposure and impact.

And so, the Montessorian prefers to speak of group-learning, rather than group-instruction. Bailey observed: "The directrice hovered outside of the group, suggesting but not forcing herself upon the children. They turned to her when they needed her, but their greatest interest lay in the joy and power of working and learning together ... the Montessori directrice [teacher] was always their captain and guide ... this group-learning was carefully watched and safeguarded by the directrice, but she never forced her personality upon the children. The children left to their own efforts, found a stimulus to a wholesome kind of competition."(355) And, it should be noted, this is the only form of competition to be found within the classroom, that which is naturally created when children work together and observe their differences and are challenged by them. Much to the surprise of many educators, Montessori found it unnecessary to motivate children either with competition or with offers of rewards and threats of punishment. Initially a surprise to Montessori, self-achievement and satisfaction proved to be a much more positive and powerful source of encouragement and motivation.

3.2.7 Purpose of Didactic Materials.

Use of Sensorial Materials

We now have a perspective from which we can examine Montessori's purpose in her didactic materials, specifically with reference to criticism concerning the sensorial materials. Here again, it is appropriate to address one of Kilpatrick's most antagonistic comments: "We must ... take exactly the opposite view from Madame Montessori as to the nature of sense-training. She says that 'the aim is not that the child shall know colors, forms, and the different qualities of objects.' We say that the aim is exactly that he may know such things."(356) We should no longer be confused by this sort of argument. Specific knowledge was not Montessori's goal: "To have learned something is, for the child, only a point of departure."(357)

Montessori was educating for the child's need to develop. For the young child [first plane of development] that meant developing one's powers of observation, discriminating between and among similar objects, recognizing identities and contrast, identifying an idea with a corresponding reality, forming judgment, deciding and reasoning...in short, learning to think. "The stated goal [of the didactic materials] is that children be able to correctly observe objects and to distinguish identities, differences and resemblances."(358) "The wider goal is to eliminate mental confusion and replace it with order so that the child is not confronted with a seemingly chaotic universe."(359) Meanwhile, the critics offered specific complaints about teaching specific skills, illogically oversimplifying Montessori's ideas by drawing conclusions about isolated and incomplete aspects of learning activities as if they were complete. Because the critics had no idea why Montessori claimed her set of purposes in providing specific materials they had no basis for understanding their use. For example, H.W. Holmes commented: "The Montessori apparatus satisfies the sense hunger when it is keen for new material, and it has besides, a puzzle-interest which children eagerly respond to."(360) Further: "It is quite possible that the real pedagogical value of the Montessori apparatus is due to the fact that it keeps children happily engaged in the exercise of their senses and their fingers when they crave such exercise most and to the further fact that it teaches them without the least strain a good deal about forms and materials."(361) The important questions that are missed here are: "Why is there a sense hunger?" and "Why does it teach children without the least strain?" Montessori would respond that the materials satisfied these needs because the young child is seeking to ground itself in reality. Children crave exercises that will help them to order their environment, to make sense out of it and to achieve those skills which allow them to perceive their environment effectively, all the while satisfying their need to move. As discussed earlier, and it is an easy point to lose when we get involved in examining the diverse purposes of these materials, movement is the essential key to allowing the child to internalising these experiences. Children, during the first plane of development, absorb their environment by doing. We do not instruct children at this age, we provide an environment in which they can draw from their own resources and build upon them, in construction of themselves through their own self-determined and self-directed activity.

The two year-old is attracted to the beauty, the order, the colors, of the didactic materials. The stimuli themselves |the materials], not yet the reasons for things, draw attention. Boyd quoted Montessori in her first English edition of THE MONTESSORI METHOD (on page 216): "The sensations he [the child] experiences when he hears, sees, and touches, are what mainly occupy his mind. In the absence of the higher mental activity, he makes little or no attempt to interpret the sensory data in rational terms. They exist for him as complete facts in themselves."(362) Far from being limited to the training of senses, as Montessori's critics assumed, the Montessori materials are designed to cultivate the mind as well. Stevens commented: "Proper sense training should lead to observation ... it is better to leave the child free to make his own observations than to give him information which may satisfy him for the moment. ... It is better, for example, to educate the chromatic sense than to give a definite lesson on color."(363) "The material ... relates directly to the life of the child, and aids in making him independent. It is more auto-educative because it controls the error of the child, in the beginning at least, and needs little help from the teacher. It is progressive as it leads the child by a series of logical steps from sensations to ideas, from the concrete to the abstract, from simple muscular coordination to acts involving much intelligence and thought. By it all the senses are trained, especially that of touch, but the aim of this training is not to perfect the senses but to lead the child by full sensory life to perception and conception. Critics of the method fail, I think, to see that the purpose is for general sense impression rather than formal discipline."(364) This process of mental development is not something we can do for the child. Lisl Barnett's notes from Montessori's 9th lecture in London, 1925, refer to this process in presenting color tablets: "In this case, too, [color gradation tablets] our object is only to present the material and show how to use it. The rest does not lie in our power. If he does not see the colors, we cannot do anything. We allow him repetition with the exercise, and after a long experience, he will see the differences."(365) And later in these lectures, Montessori noted that "We do not confuse the child with scientific, analytical study at this age. We wait to do such until the child is prepared for it. This is sometimes not until the child is six or seven."(365--same reference as above) Mario Montessori Jr. noted: "The material does not, in the first place, teach factual knowledge. Instead it makes possible for them to re-organize their knowledge according to new principles. This increases their capacity for learning."(366) These new principles are arrived at from the child's increasing awareness of his environment and his increasing ability to observe and discriminate the elements within that environment.

As we refer to the criticisms that were directed toward the didactic materials (see section 3.1.4) they seem to be grounded too much in the concrete observable details of the materials, lacking any real sense of the uses or purposes which Montessori had in mind. The many critics who questioned the value of sense training, and were concerned about Montessori's assumption of the transference of sense development to everyday experiences, truly missed the essence of her concepts. While the critics were concerned about whether learning to distinguish a hue of red from pink would transfer to an ability to identify those in a concrete way later, Montessori focused on those skills which allow a child to observe, to discriminate, and to reason, which amounts to the ability to think. The purpose is not to have a particular skill in being able to distinguish red from pink [although that will also happen]. It is only through lack of appreciation of this that Professor Dewey could possibly say, "Sense training becomes a mere gymnastics, and easily degenerates into acquiring what are hardly more than mere knacks or tricks in observation, or else mere excitement of the sense organs."(367) What is a trick in observation? And what is wrong with excitement of the sense organs? Montessori observed a sensitivity to the development of senses and it is through this sensitivity that she attracts the child to materials which will allow them to develop their perceptive skills. 'To know' some specific bit of knowledge is an incidental consequence of these larger cognitive tasks.

We have focused on the sensorial materials, but the didactic materials are related to all parts of the classroom. The goals of the didactic materials which we have discussed up to this point relate to others as well. Below is an example of an exercise drawn from "practical life" called "dishwashing." While the critics decried a child's need to learn to wash dishes; in fact, the purposes are multiple:

- that the child becomes aware of logical sequences acquired in the performance of a task (i.e., the dishes must get wet before the use of soap is effective);
- control of movement: the gross and fine muscular control as well as the mind directing the body;
- sense of a complete cycle ... beginning and completing a project;

- interest in the activity for its own sake ... the pleasure of engaging in "work";

- observational, discriminational skills (are the dishes clean, dry);

- recognition of the group and others' needs (sharing the activity or not, putting the apparatus away so that it is ready for the next child, finishing quickly when another child is waiting, does someone need these dishes);

- patience and social courtesy skills (the child must wait or ask to participate if another child is using the exercise, skills of sharing).

Obviously the child does learn to wash dishes. The child is motivated and filled with pleasure and challenge from this task. But the "knowing" how to wash dishes is insignificant in comparison with these other achievements brought about through "doing." To the child, learning to wash those dishes might be of monumental importance, depending upon those desires which the child brings to the task. Because of this, every task leading up to the challenge of washing dishes helps to insure the success of that activity.

Montessori's goal was to provide an environment which encouraged the development of reasoning skills while methodically developing the muscular control and discrimination skills. Opposed to Dewey's claim that the materials "controlled" what was to be learned, Montessori's purpose was to make the child independent of the materials, allowing the child to pursue personal interests based on personal capacities. But it was quite clear to Montessori that a child was not capable of exploring complex questions until basic skills, both physical and mental [muscular and discriminatory] were acquired. Thus, learning to use certain materials -- challenged by the requirements of the materials themselves and the social environment in which they function -- paves the way for extensive creativity in the use of one's environment. What was viewed as "control" to Dewey, is really "providing the basics, the foundations," according to Montessori. The conflict between these two divergent interpretations lies more in their focusing on two different levels of development than in actual differences of opinion. Dewey was assuming, in error, that the materials he was criticizing were meant for older children than Montessori ever intended. Dewey and Montessori had many fundamental differences in their pedagogies, but the criticisms raised by Dewey did not adequately focus upon them because he failed to address the practices in the Montessori learning environment which would be comparable to the practices he was promoting. As was true of most of Montessori's critics, Dewey neglected the broader aspects of how the Montessori materials functioned in the total learning environment thereby limiting the perceptions of their full value.

Let's examine the criticism that Montessori's approach of isolating initial experiences was, as the Gesells suggested, dangerous and fallacious.(368) The Gesells suggested that for Montessori isolating experiences were required because the child received sensorial impressions in a passive, non-motor manner, and they argued for more active engagement.(369) Morgan warned that "The very simplicity of many of these exercises might cause a child of vigorous and healthy mentality to despise as pre-analyzed and pre-digested material."(370) He makes his own interpretation of Montessori's intent by concluding, "Care is taken that only one simple result is to be obtained at a time."(371) It should be obvious to each of us now, that the critics had a very limited understanding of what was actually to take place in the classroom. Far from being intended for the passive reception of information, Montessori developed the materials to elicit very active responses, physically and mentally. The materials are progressively more challenging as the cognitive capacities of the child develops. Once again, the critics did not seem to understand that these materials were designed for two to four year-olds, not for the typical five to six year-old kindergarten child, which was their focus. Montessori found the young child confused by more complex materials, and observed that the child was especially enticed by graded [methodically subdivided materials which became progressively more complex] activities.(372) There was so little comprehension of the purpose of these materials, that conclusions such as Morgans about "single result" totally confuse the ends with the means. Far from having the single result in mind, Montessori's didactic materials were "process materials" systematically designed to help the child "acquire a new perspective in his exploration of the objective world."(373) While there is legitimate room to debate what the elements of what one's "objective world" are, and whether Montessori's materials actually provide for these, this question seems to lie far beyond the critics' interest. Mario Montessori, Jr. explained: [the material] "makes it [the child] aware of certain qualities of the objects, their interrelationships existing principles of differentiation within a given category, and special techniques for handling objects. It challenges the intelligence of the child, who is first intrigued and later fully absorbed by the principles involved."(374) Once again, Montessori's critics have been found to have assumed singular goals for Montessori learning materials and have failed to show appreciation for, let alone address, the more complex aims of the materials.

It should be noted that Morgan's and Kilpatrick's concern that the didactic materials would become despised or uninteresting was a theoretical projection only. Montessori's students choose their own work; so there would be no danger that a piece or set of apparatus would become despised. It would simply be unused. If the materials did not hold the interest of the children they would be removed from the classroom. I think it's possible that Morgan, the Gesells, Wynne and Boyd (375) have interpreted as "passive" Montessori's explanation of "subconscous learning stages," which Montessori called "sensitive periods." She also used the terms "passive curiosity" and "auto-education," which to the critics, picking statements out of context, might suggest "passivity." Nowhere does Montessori suggest that any experience in the classroom was non-motor or passive in the sense these critics suggested. A systemized introduction of new sense experiences within a framework of auto-education is not the same as "pre-analyzed and pre-digested material." Morgan concluded that this provided a "smooth and easy channel along which the mental activity of ... [the] pupil is to glide."(376) He was critically inferring his concern that the Montessori materials were doing all the work for the child, but his actual statement is not far from Montessori's intention of eliminating the unnecessary hurdles created by disorganized, distracting, frustrating and imprecise materials.

W.H. Holmes, desiring that Montessori teach the practical life exercises in connection with such things as doll-playing activities(377), missed Montessori's emphasis on allowing a child to integrate a new skill (like buttoning) with activities which already required incorporation of that ability (putting clothes on a doll). Montessori discovered that she could eliminate the frustration experienced by a child anxious to participate in social activities (e.g. playing dolls with friends) by separating "learning the skill" from "using that skill."(378) Montessori felt that the emphasis of making every learning task into a social activity was counterproductive. It served to mask and inhibit the learning of the task while potentially interfering with normal social relationships by putting children's self-esteem on the line.

It is clear from the concern raised about harming a child by isolating the auditory, gustatory, tactile, olfactory and stereognostic senses from the sense of sight that the educational psychology information available to educators during the turn of the century lacked appreciation for the child's ability to develop his senses. We no longer speak of overdeveloping our senses. In contrast to Montessori's critics, stating that Montessori was wasting the child's time with unnecessary sensorial exploration, early sensorial experiences are recognized as being quite valuable, to whatever extent the child's interest is engaged.

Montessori's purpose in isolating experiences integrated a number of points which her critics did not recognize or see as important. One of these points was her discovery that very young children were interested in a whole variety of materials normally reserved for older children if the materials were simple and concrete.

Montessori concluded from her observations that the normal environment was a very confusing, disorderly one for the young child. She designed a "prepared environment" which ordered stimuli from simple to complex via a series of materials that moved a child from concrete to progressively more abstract activities. She sought to determine the essential features of the child's objective world, and broke them down into concrete, absorbable parts, to become combined and abstracted as the child developed. Montessori felt this increased and pinpointed the child's interest and abilities by systematically providing opportunities to manipulate and focus on individual stimuli. By developing materials which held within them a "control of error" these materials maximized the successful encounters and minimized the frustration and failure children experienced in the traditional classroom.(379)

Evelyn Ellis represented many of the interpreters of Montessori when she commented that she "first had the mistaken conviction that the sense training apparatus was the most important aspect of the Montessori materials."(380) Unlike Montessori's critics, however, Ellis got past this impression and "later came to realize that the use of the materials was superficial without an understanding of three basic principles: 1) atmosphere of freedom; 2) voluntary attention; 3) individual work."(381)

The question which seems most relevant tended not to be raised by the critics: does isolating and simplifying stimuli best serve the optimal educative process. Obviously, this one question is many. Educators are as unable to agree on what the optimal educative process is today as Montessori's contemporaries were. However, Montessori's critics seemed unable to focus on this larger question when relating their concerns about Montessori. Their limited understanding of Montessori reduced their criticisms to specific aspects of particular materials, which resulted in failure to even adequately address those particular questions. Even Kilpatrick's attempt to get at the larger question of the purpose of educational materials--for him 'to know' specific bits of information-- remained a limiting supposition, used to determine the value of Montessori materials without his once trying to reflect upon their value within the total Montessori learning environment.

3.2.8 "Child's Work" |"Play" vs. "Work|

The critics drew a picture of the Montessori environment as one where the child was allowed only to "work," where the games of childhood were "meaningless" to Montessori and where Montessori did not appreciate the value of play. By now these sorts of criticisms should be sounding rather shallow and simplistic. Realizing that the critics lacked understanding of Montessori's total design for learning, and may even have felt threatened and challenged sometimes by the claims of phenomenal academic achievement by children observed in Montessori learning environments across the Atlantic ocean, we need to seek out the root of the impression that Montessori denied children the opportunities for play. "Play" within the scheme of "social groupings" was the foundation of the Progressive kindergarten's learning environment. Montessori's critics lashed out at any suggestion that there might be a different way of perceiving the tasks of the preschool child.

Montessori saw the child's entire personality involved in the process of self-construction. Every movement and activity of the child was directed toward his or her own growth and development [on an unconscious level]. On that basis, Montessori did not feel it valuable to distinguish "work" from "play." For the young child, it was all the same. Everything the child chose to engage in was part of this process of development. The key here is the child's choice. Montessori's learning environment was based upon the freedom of the child to determine his/her own activities. Tasks chosen by a teacher or parent, based upon external forms of motivation, would appropriately need to be distinguished from self-chosen tasks, but Montessori was suggesting a learning environment which did not rely on external motivaters. Her critics, who seemed unable even to conceive of a productive learning environment in which the young children's activities were primarily self-determined, needed a subdivision to categorize "play" as child-determined and "work" as adult-determined. It is truly unfortunate that Montessori dismissed the distinction between these two terms so perfunctorily in light of the strong distinction which exists for most of us. Much confusion of meaning and intent related to Montessori exists as a result.

Piaget divided the elements of play into three stages of development: practice, symbolic, and games with rules. This was not in contrast to Montessori's understanding of the child, though. It does offer perceptions into the possible progression of development. In fact, the sequence of activities found within the Montessori learning environment reflects this general progression. Montessori found the term "play" being placed in a false dichotomy with "work." She carefully distinguished the difference between adults' need to work for external motives with the child's need to work for the construction of his/her internal self, which required no external motivation. In notes which come from Montessori's 1935 London teacher training course, Montessori said: "It has often been said to me that I am able to confer upon the children the gift of joy, but I have not given joy to the children. I have allowed the child to work, that is what I have done. Joy comes from the inner life, being free, so that the mental faculties are developed .. in every stage of life, at every age, liberty is the realisation of the loftier possibilities of one's energies, independence and perfection."(382) And just as "child's work" is vastly different from "adults's work," children do not experience the same sort of fatigue adults do. The work of the child energizes and empowers.

The following quotes from Montessori further explain her aims: "The child is active that he may grow; the adult, that he may produce."(383) Thus Nancy Rambusch later wrote: "We have often equated the notion of play with that which has no specific aim when viewing children engaged in it, as opposed to work, which is more immediately productive. And yet, in looking at a child engaged in a meaningful activities, we see that too often as adults, this is a semantic distinction. The child is straining to grow, straining to develop -- and through the sequence that Montessori has developed, the child is free to move from challenge to challenge, building on that which has gone before, anticipating that which is to come after."(384)

Dewey appreciated Montessori's avoiding the distinction between "work" and "play": "We must avoid the separation of play and work, which the adult makes when thinking of children. To the child, his play is his activity, his life, his business. It is intensely serious. He is absorbed, engrossed in it. It is an occupation. Hence, many things which to the adult are work, or even drudgery, may be play to the child; like sweeping, dusting, washing dishes, etc.; it all depends upon the spirit in which the child enters into them. If he does them for the joy of it, it is play, if merely for some external result of necessity, then it is work, in the adult sense."(385) Rusk offered an important observation: "The very absorption of the child in the exercises has cast doubt on their play value, but the characteristics of play are that the activity must be self-selected, not dictated by another, and the activity must be an end in itself. The Montessori exercises satisfy both these requirements, and the concentration of the child is the highest testimonial that can be paid to the choice of the material."(386)

Anna Freud, who worked with teachers from the Vienna Montessori School |with Lili Peller, Emma Plank, Annie Hermann and Liel Barnett, among others| as well as from several other Montessori schools in Germany and England, and who consulted with Annie Hermann when Ms. Hermann became director of New York City's Child Guidance Clinic, had a highly favorable impression of the Montessori learning environment. She considered herself one of Montessori's followers.(387) Anna Freud specifically singled out her recognition and appreciation for Montessori's ideas related to the value of the materials and of allowing children to work constructively: "That pleasure in achievement, linked only secondarily with object relations, is present in very young children as a latent capacity is demonstrated in a practical manner by the successes of the Montessori method. In this nursery school method the play material is selected so as to afford the child the maximum increase in self-esteem and gratification by means of task completion and independent problem solving, and children can be observed to respond positively to such opportunities almost from the toddler stage onward.

Anna Freud continued: "Where this source of gratification is not tapped to the same degree with the help of external arrangements, the pleasure derived from achievement in play remains more directly connected with praise and approval given by the object world, and satisfaction from the finished product takes place at a later date only, probably as the result of internalization of external sources of self-esteem.

Freud noted: "Ability to play changes into ability to WORK when a number of additional faculties are acquired, such as the following:

a) to control, inhibit, or modify the impulses to use given materials aggressively and destructively (not to throw, to take apart, to mess, to hoard), and to use them positively and constructively instead (to build, to plan, to learn, and--in communal life--to share);

b) to carry out preconceived plans with a minimum regard for the lack of immediate pleasure yield, intervening frustrations, etc., and the maximum regard for the pleasure in the ultimate outcome;

c) to achieve thereby not only the transition from primitive instinctual to sublimated pleasure, together with a high grade of neutralization of the energy employed, but equally the transition from the pleasure principle to the reality principle, a development which is essential for success in work during latency, adolescence, and in maturity."(388)

As we've heard before, Montessori did not begin with any pre-set ideas about what the child was to do in a learning environment. She observed the child choosing didactic materials over toys and real stories over fantasy. "Montessori found that, given a choice, children chose the activities that eventually came to compose the Montessori environment. She herself made no value judgement about this choice. She merely observed it and accepted the children's behavior. The fact that Montessori children generally chose activities that inform them about the world outside themselves may be in part the result of two aspects of their lives. First, the practical life activities, based as they are on the actions that children see adults performing in their environment, may partially meet their need for dramatic play ... second, children in our culture tend to have more opportunities for self-expressive play than for activities that develop their knowledge of the outer world. Therefore, given a choice, they tend to choose the latter."(389) This quote from Mario Montessori, Jr. was in response to the question about Montessori denying fantasy play in the learning environment. It accentuates the most important point that the learning environment must meet the needs and interests of the child. If the materials which Montessori designed for the classroom do not do this they no more belong in the classroom than any other set of materials. Montessori's intention was that her method of observation and inquiry would continuously allow new insights into the needs and interests of the child and classroom of children. Montessori's critics questioned whether education could possibly exist in an environment without punishments or rewards.

We've already examined the limited use of punishment by isolation. Montessori began her experiments in the Casa dei Bambini offering rewards to the children. They rejected these rewards as if insulted. She came to the conclusion that the satisfaction provided from the exploration of materials was reward in itself. She perceived that the child's sense of achievement related to self-esteem and joy in the construction of herself or himself was great enough motive and that the child who was seen working in a Montessori classroom is working only because the child is interested. The child isn't working for reward and is not working for fear of punishment. The teacher is to encourage, stimulate, and challenge. (see Section 4.2), but does not persuade the child to work. Thus J. McVicker Hunt feels that perhaps the Montessori learning environment has "provided a practical answer" to what he calls "the problem of the match": that of being able to match up the child's ability and interest levels with learning materials in the classroom.(390)

Fynne was concerned that Montessori's criteria for keeping materials within the classroom was based upon two false notions: "polarization of attention" and a child's desire to "repeat the exercises." He elaborated on how the teacher's observation of a child's attention might be misinterpreted. Joy Turner feels that Montessori's concept of polarization of attention might better be explained in terms of Hunt's idea of "the match," that this concept of seeing the child engaged in an activity at a personal developmental level can be observed by the adult to determine whether certain materials are appropriate or not. Mary Fugina, in a dissertation called "Origins and Current Status of the Montessori Movement in the United States," noted: "If children do not reveal a desire to work spontaneously, the fault lies not with the children but with the manner of presenting the material." Further: "Montessori believed that if children are inattentive and uncomprehending, it is because the method of teaching usually prevents unsuperable barriers to the 'spontaneous' functioning of the child's mind. It is natural for the intellect to function if all hinderences have been removed; the child will automatically begin making comparisons and classifications."(391)

Benjamin Spock and Mildred Hathaway, in an article entitled, "Montessori and Traditional American Nursery Schools -- How They are Different, How They are Alike" noted: "Montessori emphasized that the child is deeply interested in work that the adult thinks of as play. Success or failure in work has an enduring effect on his character. The child soon tires of toys which have only one function, but they seek out, continue to work with, and keep returning to materials that let them see their errors and correct them, that aid their understanding of the physical world, and that develop their intellect. Montessori materials were designed so that when used in the proper sequence they gradually lead children over a period of several years, into an understanding of abstract ideas with a minimum of adult explanation and interference."(392)

Montessori offered the world a new perspective on "misbehavior." Though Montessori observed it over and over again, she was at first hesitant to state publicly that the misbehavior she observed in the classroom was "generally caused by a deviation of the child's vital energy from their normal constructive channels. The cure lies in 'normalization' through work -- any activity which involves the child's whole self and has as its unconscious aim the construction of personality. It is a form of self-expression and brings the child a corresponding joy in the performance of it."(393) After reflecting upon these consistent observations Montessori concluded that, excluding those children who are physically ill, what we consider to be a "naughty child" is really a child whose needs have not been answered. Montessori concluded that the child needs to "work," carefully defining this activity in the form discussed above: meaningful, self-motivated and self-selected activity.

In reference to the concern that Montessori denied the children the use of toys, Montessori commented: "The child at this age [three to six] is continuously at work; happy and light hearted, if always busy with his hands. Adults call it the blessed age of play, and society has created toys to correspond to the child's activities. Instead of the means to develop his intelligence, he is given useless toys. The toy has become so important that people think it is an aid to intelligence; it is certainly better than nothing, but it is significant that a child quickly tires of a toy and wants new ones ... the child at this age seriously and consciously tries to perfect himself by imitation of his elders in all the experiences of life."(394) Here again, we must be careful with our terminology. Montessori was not talking about what we today consider educational toys -- those materials which allow a child to explore and examine through movement. [Refer back to Section 2.2 Play materials.]

Montessori designed her environment with real life activities rather than the traditional ones which were limited to what we consider toy and play activities, based upon these observations: "A natural predisposition suits the young child to the reception of culture. But society abandons him mentally at this sensitive period, by its regime of play and sleep. He cannot stop absorbing or stop being active, but if there is nothing to absorb, he has to content himself with toys."(395) When we look around most of our homes, shops, just about anything in our society other than the classroom, we see very little designed which enable the child to be included in the normal daily activities. Montessori felt that children wasted their time and energy waiting for adults to do things for them,, or experience futility and frustration in attempting to do things for themselves using materials which they cannot yet cope. It is significant to note that Montessori did not deny children opportunity to play but she observed that we as a society tend to deny children the opportunity to work.

3.2.9 Problem-solving Opportunities

Dewey and Kilpatrick, along with the rest of the child-study movement people, were concerned that Montessori neglected to offer problem-solving opportunities in the learning environment. Because they did not understand the purpose of the didactic materials, and saw only that these materials limited the child, they saw no opportunities for student-determined purposefulness within the classroom. Purposefulness to Montessori, however, meant self-direction, as do all of the things discussed before as they relate to discipline, self-control, and freedom to choose an activity. Montessori's viewpoint was clearly different, but it was not in basic conflict with Dewey's and Kilpatrick's ideas about creating challenging situations which require the child to analyze and to learn to think. Both Dewey and Montessori saw the classroom environment as being one in which the child would learn through skill-development the ability to adapt oneself to his culture. Whereas Dewey saw the need for immersing the child immediately in that culture, using crude materials found in the "real-world," Montessori felt the young child needed a much more simplified environment, where he or she could develop personal skills with reliably consistent materials before being required to deal with unordered environments. Again, part of this difference lies in the age groups to which they directed their educational programs. Dewey was addressing the elementary school child, and Montessori was addressing the 2 to 4 year-old. Dewey credited Montessori for finding enticing sensorial materials for the young child, in fact.(396) Montessori felt that this two to four year-old child was simply too engrossed in self-construction to need problems on the level of which Dewey spoke; that her simplified materials stimulated and addressed exactly the kind of questions raised by the young child.

Montessori created a prepared environment intended to allow each child maximum success, where the most elementary skills could be developed in a positive learning environment. Each exercise was to presented as a challenge, a problem to be solved.(397) The elementary forms of reasoning--of which Dewey spoke-- were initiated as soon as the child was capable of such cognitive activity. In fact, completion of every task required cognitive reasoning processes. The sense of order and the development of logical thinking processes, is along the lines of Dewey, and it is in the elementary classroom of the Montessori environment, where one finds many more specific problem-solving situations. Montessori felt that the skills which she was developing within the child (refining the power of observation, recognizing identities and contrasts, identifying an area with a corresponding reality, forming judgments, deciding and reasoning(398), combined with the free choice of materials, free choice of where to be (inside the class or out in the garden), and no time limit on exploration, totally eliminated the concern over problem-solving opportunities, because they were inherent in the normal classroom situation. The same was to be said for provision of adaptive skills. The situations which arose quite naturally in the normal goings-on of the classroom, were easily adapted to by the children who had developed the capacity to observe and reason.(374) Montessori felt that the problem-solving regiment of Dewey's was far more appropriate for the older child where the problem would be a challenge rather than a learning obstacle. She described an education program for children during the third plane of development (12-18 year-olds) which concurred with Dewey's approach.

3.2.10 Errors

In section 3.1.5 we explored the concern of Montessori's critics pertaining to her attitude about the correction of errors. The critics were worried that it would be a grave mistake to allow the child's errors to go uncorrected. Now let's examine Montessori's approach, in which each child absorbs what he or she can in an environment where each is free to select materials and has an unrestricted time-frame in which to work.(400) The didactic materials are designed to be self-correcting. This means that the materials either will not work properly if not done accurately or that the materials allow for progressive skills in discrimination and motor abilities to carry out the intention of the materials.(401) Errors are a message to the teacher, which may or may not require later teacher intervention, depending upon the capacity of the material to provide the correction.(402) Careful and sensitive intervention is to be considered, not direct correction.(403) Montessori wanted teachers to keep several things in mind, which, she felt, superseded the temptation to make immediate correction:

a. The child's joy in self-discovery and exploration and the process by which the child engages in this are of primary importance.

b. The self-correcting didactic materials have already established a basis by which the child learns to correct mistakes alone, when capable.

c. The child's self-esteem is involved, thus correction requires great sensitivity to the individual child so as not to interfere with the joy in doing a particular exercise.

d. The other children in the classroom often provide low-key correction because of the atmosphere of comradery and natural interest in each other's work; this form of correction is less threatening and is to be preferred to that coming from a teacher. The children in the classroom work as a community, so that correction from each other is in the form of assistance, rarely interpreted in such a way when it comes from an adult.

e. An error is a message for the teacher that the presentation is not properly timed or presented; the error should be noted and a more appropriate time be found. If the child is involved in a situation which the child cannot resolve alone, careful assistance is provided.

f. Montessori felt the child's memory of the correction might override all other impressions of a particular lesson. She found that the child rapidly lost interest in an activity when corrected.

g. Montessori felt that error was a normal and healthy part of growing up, and that the child should be neither afraid of error nor discouraged by it. She wanted each child to experience the power within herself or himself to discover differences and improve upon earlier impressions, without taking away from the original experience. Culverwell offered some good insight on this: "It is one thing to lead the child to be sensitive to his own errors, so that he may grow to have an inner desire for his own perfection; it is quite another thing to lead him to be sensitive towards other people's estimate of him, so that he desires less to do well than to be thought to have done well...[the reasons for] Dr. Montessori in not allowing the teacher to correct the child in a mistake...she would guard the pupil against, a) such a fear of reproof as would tend to prevent his confidently showing the teacher the spontaneous workings of his own mind, b) such a diversion of his attitude towards the lesson as is involved in giving his attention to the teacher's estimate of his knowledge, instead of giving it spontaneously to the idea itself (for it is that which he ought to learn, and therefore ought to attend to), and c) emotional feelings, whether of depression at being told he is wrong, or of an undue effort to please by remembering the lesson, or of undue excitement at having pleased or displeased the teacher."(404)

There is still room for concern about a particular error being corrected before a serious habit has been formed. But the function of the teacher in his or her capacity for providing the proper follow-up lessons within the Montessori environment varies so significantly from that of the traditional classroom teacher that the criticisms are based more on what would be impossible to do in many traditional settings, rather than what was part of the normal routine in the Montessori environment. It is important to note here that Montessori did not deny the child's need for assistance. A child's request for help [the teacher's as well as from peers], sensitivity to frustration levels and the limits of a particular child to cope with a problem were legitimate indicators for intervention. The point here is not correction but assistance; the child engaged in activity is seen to be involved in a tremendously important process which must not be interferred with.

It's interesting to note how many educators believed that a teacher should correct the child's error, but those same educators were extremely concerned that there was [they inaccurately concluded] only one correct way to use the materials in the Montessori classroom. The critics were willing to allow an adult to do what they would not accept from the materials, to provide form and substance for the child's learning. Criticism that materials were designed for a specific purpose failed to appreciate this as a method of providing special curriculum and minimizing the need for adult correction and interaction. This is another example of failure to comprehend the role of the materials, not only in what and how they allow for learning but also the way in which they fit into a system of self-directed, positive education. Providing materials which do "correcting work" for the teacher not only encourages the child's development on all levels and is sensitive to the emotional needs of the child by protecting the child's self-respect, but it saves the teacher for more important work. In the next chapter we will examine the role in the teacher.

4.0 THE TEACHER:

In this chapter we will explore the role of the teacher in the Montessori learning environment. The chapter on Montessori theory has provided a basis on which the basic concepts of Montessori can be understood. I will keep repetitions to a minimum, so a prior grasp of Section 3.2 will be necessary.

4.1 Criticisms

One category of criticisms directed toward the teacher is represented by Boyd's concern that though the Montessori teacher was supposed to ascertain the needs of the individual child, the presentations given by the teacher involved "the same imposition of a general method."(405) The feeling was that though the educator was to know the individual child before educating him, in practice Montessori teachers were pretty rigid and routine in the way they gave presentations. On a different level, Boyd criticized Montessori for not fulfilling her promise of true freedom, because some teacher guidance was necessary.(406) Boyd felt teachers should be the source of guidance and prohibition, but felt Montessori was being false for prescribing that for her teachers. Boyd noted that "In those cases where anything specific has to be learned it is almost invariably learned by imitation either of the teacher or of more advanced scholars."(407) He went on to say: "The only point that provokes question is whether Montessori does not underrate the part played by adult models, and attach undue importance to the spontaneous inventions of modes of expression by the children."(408) W.A. Baldwin provided the most critical description of a Montessori teacher: "an imperious, insistent, dominating, adult personality, imposing itself upon the child who looks neither free nor happy."(409) Elizabeth Shaw seemed to think that the Montessori teacher's temptation was to "understimulate." She recommended that a balance be found somewhere between the traditional teacher's temptation to overstimulate and that of the Montessori teacher's tendency to understimulate.(410)

Some educators felt Montessori teachers were "not allowed" to interact with the children. Morgan criticized "that the teacher is forbidden to convey [verbal] information" having noted that children normally receive moral saturation in the home by being continually "stimulated by oral information, advice and injunction."(411) He felt that Montessori teachers offered information "almost solely by direct injunction, information, in the form of 'passive conveyance of information' during individual presentations."(412) "It is evident that, for the child's social mastery of his surroundings, the mediation of the instructor is very often necessary, and to refuse sympathetic and reasonable aid under these conditions would be pedagogically most unsound. Assuredly, reasonable stimulation from the teacher does not, necessarily, imply any interference with the child's freedom; it implies, rather, a making possible of the free working of his activity."(413) "Education ... must be primarily a work of instruction, in which the teacher as well as the pupil must take an active part as social interpreter."(414) W.H. Holmes, a superintendent of Rhode Island schools when he wrote the article "Montessori Methods" in 1912, seemed to feel that the Montessori teacher worked to eliminate personality. He noted: "Teaching or education is most of all a personal thing, where heart touches heart and soul is enkindled by soul. As a model to be imitated, as a light to be followed, the teacher should occupy a prominent place in every school. A child develops his individuality not alone by doing things of his own initiative, but by imitating more mature personalities."(415) [The reader should be cautious not to confuse this man with H.W. Holmes, a professor from Harvard, who wrote the original introduction to THE MONTESSORI METHOD, during the same year.]

So the critics expressed the impression that Montessori's definition of the teacher was of an inactive, passive, non-personality who served in the function much like an automoton, giving lessons and requiring response in "one correct way," without having a personal relationship with the child. Now let us examine Montessori's description of the teacher.

4.2 Montessori's Description

In Maria Montessori's book EDUCATION FOR A NEW WORLD, a collection of lectures, Montessori stated: "A superficial judgement of the Montessori method is too often that it requires little of the teacher, who has to refrain from interference and leave the children to their own activity. But when the didactic material is considered, its quantity, the order and the details of its presentation, the task of the teacher becomes both active and complex. It is not that the Montessori teacher is inactive where the usual teacher is active; rather all the activities we have described are due to active preparation and guidance of the teacher and her later 'inactivity' is a sign of her success."(416)

Montessori felt the kind of teacher she desired in the classroom was so different from the traditional concept of a teacher that it needed a different name, and so she invented the name "directress, (sometimes spelled "directrice"). Because in modern times "director" has come to be known on a bureaucratic, organizational level, it doesn't provide the most appropriate image, and because the term is not a familiar one to us I have not used it during the course of this paper, so far. I will use it in this chapter to remind the reader of the distinctions intended by Montessori's use of this term. This new title of "directress" was to represent a very new role and new goal for the teacher in the classroom. It emphasized the guidance, the stimulation, which children need rather than the directive teaching or instruction of information. It represents a new relationship with the child, and a new relationship with the environment.

Montessori stated that there were two qualities which this "new teacher" needed to avoid: pride and anger. The terms in direct opposition to these two, "humility" and "patience," were, to Montessori, the guidewords for the Montessori directress. The directress is not supposed to allow personal pride and anger with respect to his or her own level of knowledge or his or her expectations of the child to get in the way of allowing the child the opportunity of self-construction. Montessori's concept was that only the individual child can do this construction, sometimes on an unconscious and other times on a conscious level; and this requires that the teacher be able to stand away from the class, observe and utilize knowledge about the dynamics of each child to plan activities which reflect the needs being made apparent by the children's behaviors...always ready, never intruding. Montessori felt that many of the children who were being described to her as "tyrants" were actually children who were continually experiencing the dominating will of an adult inhibiting the needs of the child's will to develop. As we can tell from Montessori's theory, she did not believe in abandoning the child to chaotic and uncontrolled activity. This was not the freedom of which she spoke (see Section 3.2.3). Structure from the physical environment and very specific limits and quidelines from the directress establish the optimal balance between children's needs for growth and development and uncontrolled, unsafe behavior. The Montessori directress must be able to trust in the child's ability to learn and develop through this balanced freedom which she provides in the prepared environment.

The directress must have a comprehensive understanding of the purposes of education, the child's planes of development, and the role she plays in creating the prepared environment, which includes herself. With this knowledge as the foundation, the major task of the teacher is to use observations of the child to determine his/her needs. J. McVicker Hunt, in his introduction to the Montessori method, praised the willingness and ability of the Montessori's directress "to observe children working with the didactic apparatus, and from observations, to invent ... modifications of the situation that will foster a child's psychological development."(417) Montessori's definition would not limit this activity to fostering psychological development, but would include the other needs of the child as well.

The skills required in learning to observe are not simple ones; and the sensitivity to pick up on clues and key elements in children's behavior, to interpret that behavior and to plan for future exercises from such evidence is not something that can be easily taught. The principles of observation and of using those observations for further education is much more difficult than simply allowing the prepared environment to become an inflexible source of learning materials. I see this as one of the greatest dangers in a Montessori environment, because it is so easy for the directress to immerse herself or himself in the presentation of the activity and forget about the flexibility which is required to make the prepared environment come alive for each individual child. But Montessori's intent is clear: the environment is not to be rigid, and the materials are not to be used dogmatically. The prepared environment must be used in an intelligent, sensitive manner. In an article on "The Principles and Practice of Education" Montessori wrote: "If children are to learn spontaneously, two conditions are essential. One of these is that the adult must be to them not merely a guide, but a real reanimator -- one capable of evoking their youthful enthusiasm by her presentation of culture in noble fashion, one who, as an educator, has a real personality, a feeling heart, and takes keen interest in her pupils; one in whom children recognize a source of inspiration and upon whom they can rely."(418) The impressions of rigidity and dogma observed in some Montessori classrooms are signs of a teacher's failure to use the learning environment in the way Montessori intended. It is easier for many teachers to be inflexible than to be sensitive and flexible to individual needs. A teacher's desire for control through external discipline often translates into rigid and absolute requirements for classroom behavior. This can be true in any human relationship.

In response to some of the other criticisms Montessori noted: "Teachers are not to be abolished; they are to be transformed; instead of frustrating the learners eager desire for work, as they so often do today, they are to become aiders and furtherers of enthusiasm in study; so that the eagerness of the young workers may develop into a fine enthusiasm about life itself--enthusiasm being an expression of personality and the clearest possible indication of progress."(419) Montessori goes on to say: "The idea that the child is to be freed entirely from the teacher is a wrong conception of freedom...the idea which does away with the teacher is essentially wrong and false to the nature of things; the teacher should be felt by the pupils to be a person of intelligence, full of life, rich in knowledge and experience. Given such a teacher, her educative success depends upon the child's acting for himself and unfolding his powers spontaneously."(420) Lawrence Foster, in his dissertation on "Maria Montessori and Modern Educational Thought," noted, "The importance of a warm and close, but unobtrusive relationship between teacher and child has been stressed many times in Montessori's lectures."(421)

Sister Murphy, in an article entitled "Montessori's Concept of the Directress and How These Qualities are Underscored in Current

Psychology," complements this idea when she notes that the teacher's "'unobtrusiveness' must have the quality of authentic richness and charm, like clear light, expensive perfume, perfect weather, and nourishing food. Its very 'rightness' makes it unobtrusive. It is a health-giving, delightful presence in which the child is free to grow."(422) On another level Pauline Foster, in her Masters thesis entitled "Montessori: How and Why It Works" indicated that the teacher must be "a very skillful, highly structured center of peace."(423) In these impressions we have a distinctly different image from that provided by Baldwin: "imperious, insistant, dominating, adult personality, imposing itself upon the child..."{See footnote 409}.

Rita Kramer quoted Helen Parkhurst, one of the first American Montessori teachers, who went on her own to create the Dalton Plan: "When you are in a Casa dei Bambini to observe the children, you are working and laboring to learn something which I do not give, which an assistant does not give, which no one else gives--the capacity, the sensitivity which permits your learning the intimate facts revealed by the children themselves. You alone can prepare yourselves to observe, just as the children must develop themselves by their own experience."(424) On many occasions we read Montessori's exclamation that it was not she who taught the children, but the children who taught her. Montessori's whole method was derived from the lessons she learned in observing the child.

There must be some confusion by this time in understanding how a teacher can possibly spend her time observing the classroom when there are 20 or 30 bodies depending upon him/her for a completely prepared learning environment. Obviously, the children do not begin their first day knowing how to function in a Montessori environment. The first activity for the teacher, after she has prepared the environment, is to introduce the students to this environment. Once the structure of the environment is established for the children [see section 6.2 and 6.3 for a brief description of this], the directress begins to transform her/his role in the classroom from one similar to that of a traditional teacher to the one described above.

The first challenge of the teacher after the children are familiarized with the environment and are comfortable with each other is to find the means of drawing the attention of each child to materials which match his/her level of development and which encourage further development. From that moment on the teacher concentrates on finding activities with which each child will interact and explore with interest and enthusiasm. The attempt is to minimize teacher direction and interference while maximizing the child's curiosity and abilities with stimulating challenges. A corollary to this task is the skill required of the teacher to meet the needs of the individual child.

The role for the directress is one of facilitator. As in Carl Roger's description, the Montessori teacher was/is to be a sensitive, personal guide. Unlike the Rogerian model, the Montessori directress' goal was to emphasize the magnetic attractions inherent in an environment of materials designed to meet the needs of the children rather than putting maximum emphasis on the teacher-student relationship as the force behind learning. Mario Montessori Jr. wrote of the teacher's role: "This challenge to recall a wandering, inattentive child is the real root of judgment, character and will."(425) "To be able to choose objects that will interest and hold the attention of the child is to know the means of aiding it in its mental development."(426) So, at first the Montessori directress is extremely and visibly active in moving from child to child or small group of children to group of children establishing a presence in a classroom designed for personal exploration, initiating them to particular activities and then withdrawing as each child engages him/herself. As the child becomes capable of directing more of his or her own activity by acquiring the ability to make choices, he/she functions more and more independently of the directress. Since the directress' "aim is to foster the child's independence, free choice, and spontaneous activity, she will be successful only insofar as this transference of roles takes place,"(427), points out E.M. Standing, who also provided an example. That is, a child of 7 years had received a certain presentation in arithmetic. "After a while -- as soon as she understood how to use it -- she looked up ... smiled, and said simply 'you can go now.'"(428) Obviously, the need for the teacher's direction is much more nearly pervasive for a 2 year-old than for this 7 year-old.

Montessori described the stages of a directress' role in this way: 1) She is a guardian and custodian of the environment. She must keep the didactic material beautiful, shining and in good repair, with nothing missing, so that it looks new to the child and is complete and ready for use. ..."2) In the second stage the teacher has to deal with the children who are still disorderly, with those aimlessly wandering minds which have to be attracted to concentration on some work."..."3) Once the children's interest has been aroused, usually by some exercise of practical life for the material has not yet suitable conditions for its presentation, the teacher withdraws into the background and must be very careful not to interfere-- absolutely not, in any way." Though Montessori warned against providing unrequested praise, which may inhibit a child's interest in continuing that work, the child who has chosen to show work to his teacher is to get sincere response to it. The teacher is to rejoice with the child over his or her flower of accomplishment.(429)

Montessori advised the adult who wishes to become a directress: "It is not a question of giving a child a knowledge about the qualities of things, such as size, shape, and color, by means of various objects. Nor is it [the directress'] aim to train a child to use the materials correctly. This would put our material in competition with others ... and it would demand the continual active operation in providing information and hastening to correct a child's every mistake until he has learned his lesson."(430) Rather: "the work of education is divided between the teacher and the environment." "An activity is to be left mainly to the child." ... "the principal agent is the object itself and not the instruction given by the teacher."(431) The teacher's duty is to be a "dynamic link" between the materials and the child, a deceptively challenging goal. Montessori's oft-remarked statement that "things are the best teachers" continues to raise concerned eyebrows as an indication that Montessori denied the important and primary role of the teachers' human interactions with their students. While Montessori was concentrating on the overvaluing of instruction, her critics were alarmed by her promotion of impersonal learning environments. This is another example of the frequent inability of critics to integrate the many facets of a Montessori educational program. Montessori's critics were focused upon the young child's intense need for socialization while Montessori was relating her observation that children learn by doing. The elements of socialization and activity are not mutually exclusive despite Montessori's critics' attempt to suggest such.

Presentations of the materials, which are the teacher's responsibility, include several tasks: isolating the object; drawing the child's attention to some special object of the lesson, as a challenge to be tried, using the materials to give the child a visual impression of one way in which the materials function. This is an extremely important point that is misunderstood on a very regular basis and is part of the criticism that there is only one way to correctly complete an exercise. Montessori teachers have been known to give the same presentations in the same way to all the children year after year after year. However, the consistency with which the child sees this presentation is the important element here. It is not that there is only one way to give a presentation but that the child will come to recognize the basic function of a piece of material, first through visual experience of it and then personal exploration with it. This idea was never intended to mean that the child had to reproduce the presentation in kind. When Montessorians speak of a child using the materials in a correct fashion they are speaking of respecting its function--for example, using cylinder blocks as cylinders rather than as missiles. Also, it is important to recognize that the teacher does not provide a direct lesson of each specific exercise to each child. As often as not, the children in the class learn by observing classmates' lessons and repetitions. If the teacher was not consistent in his or her presentations, much confusion about the logical order of the activity would result and many more teacher-child lessons would be required. Another point which is rarely discussed should be of vital consideration: if the teacher offers the class all the different examples of how a piece of equipment or set of materials might be explored, he or she denies that special opportunity for discovery for the individual child. The purpose of consistent presentations is not to spoonfeed and regulate activity; rather, it is to provide a foundation for individual experimentation and exploration.

One challenge for the teacher is how to distinguish and respect the child's concentrated activity from careless, belligerent or destructive behavior. No amount of pages written by anyone could solve this delicate challenge though Montessori's critics expected such details. The directress must keep in mind all of her goals and the needs of the child, being sensitive not to infringe when purposeful activity is in progress.

After a child has become competent in the use of a piece of equipment or set of materials, the next role for the teacher is to provide language for the activity. Finally comes a series of extensions which encourage the child to examine the materials in new ways and to begin to relate those materials to a larger environment, i.e., to the classroom, to the outdoors, to other parts of the world (For example, a presentation of colors would begin with primary colors and a number of exercises involved in recognizing and naming these colors. Extensions to this would be finding objects in the classroom which are of the same color, and then listing and imagining or exploring outside objects of that color. The next color exercise increases the number of colors and the third series introduces gradations of colors; each of these exercises would be extended in similar ways, so that by the time the child has completed the third color box he or she is examining the gradations of colors, comparing and contrasting them in the child's entire environment.)

E.M. Standing provided a good definition of the directress: The directress requires "a great variety of qualities -- knowledge, patience, observation, descrimination, tact, experience, sympathy -- and above all, charity. The science of being a Montessori directress consists in knowing beforehand the general function of the prepared environment and the nature and purpose of every piece of material in it, and the age to which each is suited. The art of being a directress relies on knowing how and when, to give any particular lesson to any particular child or group of children."(432) The challenges for the Montessori directress are clear. The tasks seem immense, requiring the teacher to engage in a process of inquiry while providing an environment rich in learning materials that satisfy the needs of all of the children within the classroom. Giving presentations to individuals or groups, relating to children on an emotional, social, intellectual, physical, and spiritual level, being able to take account of individual needs and interests, knowing how and when to provide lessons, knowing how and when to create new materials, not allowing her own needs for personal attention or her desire to attract a child to herself interfere with the purposes at hand, balancing delicately the human element and the human relationship with the child. These were and still are challenges of a good Montessori directress, of any quality teacher, for that matter.

Rambusch, in her book on Montessori called LEARNING HOW TO LEARN, put the role of the directress into the perspective of American educators: "Montessori's insistence on the directress as an ally of the child rather than as his judge anticipated the trend that has made of teachers of the young a special breed, better adapted to their needs than teachers who impart knowledge with the certainty of parents engaged in an extrinsic goal-oriented existence or grandparents who represent an immutable past and the interference of an equally immutable future. The need of non-intervention of the teacher in the child's attempts to construct himself leads to a de-emphasis on talking and a re-emphasis on showing."(433)

I found many comments among the critics related to a concern that Montessori minimized the emotional relationship between the teacher and the child. From my interviews with Lisl Barnett, Emma Plank, and Annie Hermann, it became quite obvious that this was not an impression Montessori intended to leave. Annie Hermann reflected upon the importance of distinguishing between the roles of the parent and the teacher. The teacher is not to be an extension of the parent, she is to be a friend and a guide, someone with whom the children certainly relate on an emotional level, but in a new way, as one of the first contacts in a new environment. She further noted that Anna Freud felt that the Montessori environment was a wonderful environment to satisfy the emotional, psychological needs of the growing child. Annie Hermann also commented that the Montessori directress is often the first major personality with whom the child has contact outside his/her own home environment, a distinctive adult with distinctly different roles from those of the mother and father. Emma Plank responded to my question about whether the Montessori approach met the emotional needs of the child, in this way: 'It's all a question of relationships. The teacher must train herself, something that is simply not possible to do in teacher training programs.

Critics seemed to feel Montessori trained teachers should be immune from the limits and deficiencies of the normal range of student teachers, that somehow a teacher in a Montessori classroom should completely and accurately reflect Montessori. A more realistic perspective is provided by Thomas Banta, in an article called "Is There a Montessori Method?." He noted that a person trained in any particular method is not a sufficient indication that he/she "will behave in distinctively different ways when confronted with the live, complex, functioning or malfunctioning human."(434) There are certainly no reliable means by which we can best match up teachers with methods which best suit their abilities any more than there are guarantees that a person will interact in any specific way during any specific situation. That Montessori's critics felt justified in their complaints on this issue, using specific observations of particular teachers rather than Montessori's writings and/or theory to guide them, points to a major weakness in their criticisms.

As is true for any good teacher, a Montessori teacher was/is to be able to comprehend many fine distinctions in human behavior and interaction, and create positive balances between teacher and child, teacher in learning environment, child in learning environment, child among children. The delicacy of personal situations requires sensitivity to individual needs in order to avoid dogma, unhealthy levels of frustration, inhibition of interest and creativity, rigidity, and so on. This tremendous expectation is above and beyond the routine tasks of providing lessons and organizing the physical environment. These essential features which optimize intellectual growth in conjunction with emotional well-being can be examined and explored, but are extremely difficult, if not impossible to teach. And, of course, no human being can possibly perform so ideally. Montessori wrote of the "perfect teacher" who serves as a goal and challenge to those striving to become good educators.

4.3 Teacher Training

Montessori teacher training programs available today vary from those sponsored by the Association Montessori Internationale (A.M.I.), where the training is a minimum of one year including much theoretical discussion as well as use of the materials before moving into the classroom, observing the children in the classroom, and then exploring with the children of the classroom; to several American-style Montessori training programs, the most prominent of which is the American Montessori Society (A.M.S.), which typically has an 8 week summer program to establish the foundations of Montessori combined with a one-year internship in the classroom, to a correspondence course (St. Nicholas training in London). Obviously there is no way to insure the quality of any particular teacher coming from any particular teacher training program. This is a problem all schools of education face. The international Montessori training program tends to be much stronger in providing theoretical bases and logic for the use of materials in the classroom, though the reputation is that they also tend to be much more narrowly "orthodox" in their interpretation of Montessori's writings. The A.M.I. training program is designed to include basic developmental theories as well as other philosophies of education. Most A.M.I. and A.M.S. admissions require a B.A. (a relatively recent policy in A.M.S. programs), with the hope that a four-year college program has already offered the basics of psychology, history, science, etc. The shorter training programs require much more individual inititative to study and become competent in Montessori and alternative theories. In an eight-week program, there is not adequate opportunity to examine Montessori's philosophy in depth. All of the programs must encourage further personal study, however, because there is no way to transfer the essence of Montessori without personal involvement and examination. The A.M.I. teachers are often interpreted as "orthodox" and "rigid" in the United States. Part of this attitude may stem from their greater appreciation for the details of Montessori and ensuing efforts to include all the details without conveying the ability to be sensitive to some of the deeper flexibility inherent in Montessori's philosophy. (The ability to be flexible amidst such concrete materials and structure is extremely challenging, requiring a clear view of attitudes and purposes.) The A.M.S. program prides itself on its flexible and eclectic approach to Montessori, feeling that an "American approach" is necessary for America. (These points stand out, but they must be combined with the realization that each teacher brings with him/her those abilities, sensitiviities and preferences for control/discipline that were discussed earlier.)

The next obvious question is: what kind of teacher is attracted to Montessori? Different teaching styles and differences in human needs or impressions about control and discipline determine much of how a teacher will use the prepared environment. Once again, I refer to my image of the "inner skeleton," the teacher's use of philosophy and understanding of development and the nature and function of the materials as an inner support and guide to her students' function and her own ability to function in the classroom, vs. the "exo-skeleton" model, where the teacher uses the presentations of the material as control and limitations on the child. There is a continuum along which the teacher's style may fall. At one end of the continuum is the teacher who uses the systematic philosophies to offer inner direction to education; at the other end of the continuum is the teacher who uses the curriculum and materials to determine the objectives and tasks. Another way of looking at this matter would be the range of concern for ideology versus the attention to utility, a second continuum. Any particular teacher can fit anywhere along these two continuums and still claim to be a Montessori directress. It cannot be overstressed that no matter what Montessori provided in the way of theory and materials, the teacher is the key to the whole program. This is true, of course, in any educational setting. There is nothing magical about a set of learning materials or philosophy without a personality to make it come alive.

5.0 RECENT CRITICISMS/PERSPECTIVES:

My focus in this paper has been the criticisms of Maria Montessori's pedagogy which arose between 1910 through 1925. That was the first period of popularity in the United States, and a strong period for the Progressives' Child Study Movement, which created stiff opposition to Montessori's claim for a new and better approach to the learning of children. Most of the criticisms since that period are along the same lines that we have examined, using new psychological vocabulary and contrasting Montessori with other approaches to education. The general public's critical impressions of Montessori range from thinking it a rigid, highly-structured program for early academic achievers, to a program which denies artistic, creative outlets for the child. Among the thousands of Montessori schools now available in America, few of their students' parents understand much more than that their children enjoy school and are learning a wide range of skills, a not uncommon situation in just about any quality nursery school setting.

This chapter will take a brief look at a few of the more recent critical notes raised about Montessori. I will skim over those criticisms which sound very familiar to us now, and concentrate on those which appear to be new perspectives. In fact, I have found very little with which we have not already dealt. Generally, the "new" criticisms have simply been "modernized" by being phrased in contemporary terminology. My reason for taking the space to examine recent criticisms is that interest in Montessori has been rekindled in the United States. I felt it might be useful to explore briefly current criticisms for the perspectives they may offer this study.

I have organized the sections in this chapter in this way:

5.1 National Association for the Education of Young Children (NAEYC) attempt to re-examine Montessori (MONTESSORI IN PERSPECTIVE);

5.2 Valerie Suransky, from a dissertation turned into an article and book;

5.3 Rita Kramer, a biographer of Montessori who examines Montessori's life and ideas and raises some important issues.

5.1 National Association for the Education of Young Children (NAEYC)

MONTESSORI IN PERSPECTIVE, first published in 1966, is a collection of seven articles. The NAEYC introduced their work in this way: "This compendium has been compiled for the purpose of helping teachers of young children see Montessori in an historical perspective and to raise questions as to the advantages and disadvantages of the Montessori method in terms of what is known today about the growth and development of all young children. The articles selected have been written by individuals who are well versed in the field of child development, and in the opinion of the editors, have expressed ideas which merit thoughtful consideration."(435) As the editors noted, the articles included in this collection do provide a range of perspectives, pro and con.

-Samuel J. Braun, M.D., "Nursery Education for Disadvantaged Children an Historical Review": "The program itself was considered reality-bound with no opportunity to play "house" or with "dress-ups." ... "the tediousness of teaching children how to wash a table in 10, or however many, steps, was not emphasized" during the original presentation of Montessori in this country as it is in the current practice of the "more rigid orthodoxy that has crept into the present day Montessori followers."(436)

-Edward Wakin, "The Return of Montessori": "Dr. Montessori's followers can undermine her contribution by overselling her ideas and presenting them as a panacea, instead of a provocative approach which can fit into current educational reforms. The Montessori movement may have lost its first battle in America because of unfair and one-sided criticism by John Dewey's Progressive Disciples, but it cannot win its current battle on enthusiasm alone, particularly if it is not brought into the mainstream of American education."(437)

-Britta Schill and Eveline Omwake, "The Montessori System": Britta Schill commented: "One cannot agree with the strict rules for the use of this apparatus. They are in contradiction to modern theories of child development. ... If given the time necessary, sooner or later they learn from using them. ... The more advanced material certainly is excellent for use in the first school year. But why, for example, should pre-primary children learn mathematics so that they can do square roots and decimals at the age of 6 or 7? ... One cannot help but asking if the strong emphasis of the intellectual training of the Montessori system is done at the cost of emotional well-being." ... "One cannot help but asking why Montessori tried so hard to avoid everything with a touch of imagination."(438) Evelyn Omwake: "I feel compelled to express my personal and professional bias, which is in favor of an educational experience of young children characterized by a richer and more varied curriculum than the Montessori school supports. This would be found in a school which exploits the teacher's powers to communicate to her students, her own curiosity about the larger environment--social, physical, psychological--as she explores it with them and interprets it to them; a school which permits her to actively participate in the learning-to-learn process in which all young children are engaged." Suggesting that such is not the case in the Montessori school, Omwake added: "The sounds of learning are sometimes the angry and excited tones of children working out the hard detail of social intercourse; but such noises seem to me as intrinsic to a healthy environment as the quiet hum valued both by adults and children."(439)

Emma Plank, "Reflections on the Revival of the Montessori

Method": {This name should sound familiar because she is one of the women from the Vienna Montessori School with whom I had the honor of interviewing.}: "In contrast to England, Holland, and other European countries, where the method was further experimented with and is still highly accredited, no growth or development of the method took place in the United States."(440)

Evelyn Beyer, "Let's Look at Montessori": "When we begin to examine the nature of {Montessori's} prepared environment with its highly structural materials and equally ritualized expectation of their use, along with the complete lack of raw materials with their invitations to discover and create, we begin to question the good doctor's belief ... The Montessori method is one of these promisers of quick and easy learning. For the child who is not ready, this {preliminary tactual, auditory, visual execise} would seem a meaningless kind of chore ... would be boring and limiting. I have observed some 3 year-olds being drilled in this particular exercise, and their response was not one of delight in achievement, but one of being trapped in a situation from which there was no escape ... the structured didactic materials ... definitely limiting to any imaginative use or to the delight and discovering of creating different uses of the material. I do not belittle Madame Montessori's belief in the joy of mastery and successful competion of a task, but I believe there is a shining step beyond this which the exclusive use of her materials does not provide ... minor place is accorded to creative materials .. In the Montessori school where I observed recently, there were no blocks, no easels or paints, no clay, no materials for cutting, pasting, collage. There was no room for these materials because all of the space was occupied with the didactic teaching materials. ... The artificiality of this focus on ritual and mastery of a technique rather than the function and delight in the process as well as completion of a task ... I have observed too many spotlessly clean tables being scrubbed according to an elaborate ritual of sequential steps, too many shining shoes being shined, too many highly shining brasses being polished, according to the prescribed routine, to feel that there is validity in such rigid and meaningless performances. ... its total lack of awareness or shutting out of the importance to young children of being able to act out strong feelings of fear, anxiety, anger, and delight ... The only apparent feeling that seems to be recognized is that of satisfaction and achievement in a specific task. Little opportunity and no encouragement is given for social interaction, and none for dramatic play as a releasor of tension and as a means of learning through identification and role play."(441)

William H. Mills and Gary L. McDaniels: "Montessori -- Yesterday and Today": "Dr. Montessori translated her observations and interpretations into methods, which became antithetical to her doctrines, in that her methods became rigid while her philosophy called for flexibility. .. Why do present-day children need these skills pressured upon them so early in their lives?"(442)

Barbara Edmonson: "Let's Do More than Look, Let's Research Montessori": "Perhaps the most controversial item on the list concerns teacher-child relationships ... At least for the very young children, much individual warm interaction is important. Since the Montessori teacher starts out like any teacher, able to interest, presumably she does not reach the stage of 'self-effacement' before the child is 'ready.'"(443)

None of the above comments should sound new. The second era of Montessori in the United States has not avoided the failures or pitfalls of the first. Many of the above comments serve important notice to individual classes where teachers, administrations and parents have missed Montessori's pedagogy by varying extremes. In some cases, the above critics failed to do their own proper research and were drawing conclusions from inadequate information.

The most alarming points which occur over and over again are the concerns for the emotional relationships between teacher and child, and the rigid use of materials. And it is hard to imagine that some Montessori classrooms still neglect to have arts and crafts available to the children. These three points seem to be the major weaknesses in attempts to translate Montessori's theory into practice, at least in the United States. It should be clear, however, that these are not features prescribed by Maria Montessori; that they indicate the failure of individual teachers to create a fully complemented learning environment for their students.

5.2 Valerie Suransky

The following account of Valerie Suransky's criticisms come from her dissertation called "The Erosion of Childhood: A Social Phenomenological Analysis of Early Institutionalization" (later published as a book), an article "The Bureaucratization of Childhood: Montessori and the Work Ethic," and a personal interview during the

Spring of 1982. The chapter in her dissertation on Montessori and her article are basically the same work. My quotes are drawn from a copy of her article in an unpublished form.

Valerie Suransky used the philosophical technique of phenomenology to immerse herself in three Montessori environments over the course of two years, on a periodic basis, to examine and evaluate the premises of Maria Montessori with relation to her own theories of childhood. Her Montessori resources were limited to two of Maria Montessori's books (THE MONTESSORI METHOD and THE SECRET OF CHILDHOOD) and Paula Polk Lillard's book MONTESSORI: A MODERN APPROACH. Suransky's assumption was that she could draw legitimate conclusions about the theories and philosophy of Maria Montessori on a macro-level from a series of observations on a micro-level. I'm going to list in detail some of the most pertinent comments Suransky offered without interjecting my own, initially. I would like the reader to get a flavor for the logic and flow of her arguments and challenge the reader to reflect upon the discussion of Maria Montessori's theory which has been presented earlier in this work:

> "Work is conceived as the mode basic to the development of the self and it is interesting to note the paradoxical confluence of Marx and Montessori at this point. Marx predicated his theory of alienation upon the belief that work was the mode basic to the development of the self... It is suggested in this article ["The Bureaucratisation of the Child..."] that play, rather than work, is fundamental to child-nature; that just as the adult is fully realized through meaningful labor, so, too, the

child is fully realised through play."

"It was developmentally difficult for the children to conceptualize the transition from work respect to social cooperation based on mutual respect."

"No attention was given to the feelings of the children or to the source or cause of aggression, as it was assumed to stem from lack of work involvement. The teachers also appeared to frequently deny the angry intentions when directed at themselves or at other peers. They also masked the outward manifestations of their own anger or irritation with the children through the medium of soft-spoken tones and an intensely quiet voice to indicate disapproval. .. The persistent denial of angry intention, and in certain instances, of expressions of rebellion, created an atmosphere of sham and deception. The teachers were often clearly aware of the children's intentions, yet chose to mask this through pretense. This approach fostered an ultimate denial of personal responsibility. The intentionality of the child, when it was directed against the structural order, was systematically negated."

"Children, such as Jomo and many others, who wished to play and not to 'work' emerged as social deviants, as problems--symbols of incomplete socialization. The goal of the Montessori socialization process was the internalisation of the external normative structure, whereby work was viewed as the medium ... within this structure the children were denied the possibility of play, ... of fashioning and transforming their environment through the systematic negation of self-initiated play and an education toward conformity and docility. The well adapted individuals were those that obeyed Montessori's ground rules, evinced interest in work involvement, and disinterest in sociability. Spontaneity was subordinate to the need for calm, order, and discipline. Creativity was bounded by the functionality of the materials and the demands of the work environment."

"Hence, in analyzing the Montessori method, we notice a self-defeating pattern; on the one hand, an emulation of work, apprising of the 'absorbent mind', an elaborate attempt to create out of original materials, and paradoxically, a concommitant denial of those natural processes which Montessori considered vital for the children's growth. The source of this pattern lies not only in the ideology of work, but in the ideology of structure which transforms to an ideology of containment."

"It is the environment which is set up to produce control through containment and work is merely the mode through which this is executed. Once again, we observe a stark discontinuity pattern between educational philosophy and structural control."

"The rituals attendant on 'taking out work' and 'putting away work' dominate the child's process of doing. This, in turn, is always defined according to strict spacial boundaries. Valid acts only take place on rugs, designated tables, and in the circle, three spacial extensions within which the child's movement is contained. The transgression of space and temporal boundaries leads, in turn, to the 'ascription of deviants' {Scheff, Thomas, "Being Mentally Ill: A Sociological Theory", London: Weidenfeld and Nicholson, 1966} when these norms are violated. In such a social structure, the spontaneous, energetic, playful child becomes an organizational threat in need of sanctions.

"The routinization of procedure and the maintenance of the internal equilibrium of the structure transposed upon the landscape of the child, involves a systematic negation of freedom of exploration. The child is denied the possibility of invention, owing to the ascribed uni-dimensionality of objects. To be creative, then, is to be subversive of the social order of this mini-bureaucracy."

"In analyzing the phenomenology of a Montessori childhood experience in America, critical issues of class and culture emerge. We need to question the consequences of translating and transposing a foreign educational ideology into classes and subcultures with distinctively different flavor. We need to question the impact of the Montessori order paradigm upon the

> lives of poor and inner-city children whose values, norms and cultural styles are clearly modeled upon this paradigm. In such situations, does the imposition of a Montessori method constitute an act of 'cultural invasion.'"
>
> "I conclude posing a fundamental question: Does the eradication of play and the elevation of the world of work result in the child's alienation from her own species-being; for is it not PLAY rather than WORK that is fundamental to the ontology of childhood?"(444)

Let's pinpoint some of Suransky's concerns more briefly:

a. No attention and/or complete denial is given to the feelings or true cause of aggression or intent.

b. The rules and environment are disconsonant with the level of the children's competence and interest.

c. Children attempting to assert themselves are seen as social deviants.

d. Special designs or special agenda are bound to be rigid, through requirement of the 'correct' usage of materials. No imaginative reconstruction of materials allowed.

e. The environment is set up to produce control through containment, requiring silence and immobility.

f. There is a lack of emotional spontaneity, praise and warm approval from the educator.

g. Space is geared to sedentary activity.

h. Very little opportunity is given for active manipulation of the world of objects.

i. Social development is discouraged and/or denied through the constant isolation of the working child.

j. The teacher is unable to be flexible regarding the needs of the individual child.

k. Play is not accepted as legitimate behavior and is considered anti-norm.

l. The "work-ethic" dominates, recognizing productive work as the only valid activity.

To respond to these assertions, one needs to begin with the last point, which exposes a basic error on which many of her assumptions are mistakenly founded. Suransky, using occasional, limited observations rather than thorough research into theory and into practice which accords with it, made inaccurate assumptions about the "play/work" issue which has been dealt with earlier in this paper. Suransky seemed not to be aware of Montessori's adequate distinction between child-work and adult-work. Montessori thoroughly explained that everything the child did {whether we define it as "play" or "work"} was a legitimate and important activity. All behavior, according to Montessori, reflected the child's construction of self and as such was the child's task during childhood. Therefore, Montessori called all this behavior "the child's work." Suransky used Piaget's and Dewey's theories of play in juxtaposition to Montessori, never understanding that in most respects they are complementary rather than conflicting. We can dismiss, as grossly inaccurate, Suransky's conclusion that Montessori implied that "play is not legitimate" and as such is "deviant."

The rest of Suransky's criticisms can be dismissed on the grounds that she generalized to Montessori what were individual and particular teacher failures. They are not grounded in Montessori at all. Suransky failed to question or appreciate the effect her presence made on the teachers' behaviors, particularly with regard to the personal-emotional contact many adults feel timid expressing in front of other adults. Suransky observed examples of specific teachers who seemed insensitive or incapable of addressing specific situations in what she would consider a responsive manner. We have heard this comment before and have shown that Montessori did not deny or intend to deny the feelings or true causes of aggression in children, nor did she demand the sublimation of emotions. Suransky pinpoints a crucial problem in all teacher training programs, which may be a particular weakness in Montessori training because the Montessori learning environment provides such easy structure and order upon which a teacher can become dependent. But signs of rigidity and inflexibility are the individual teachers' inability to cope with the children's needs and not the goal of Montessori education.

To say that the structure produces "control through containment" as well as the rest of these criticisms are just new versions of the criticisms examined in Section 3.1, now couched in contemporary and inflammatory terminology. Suransky's intent seems to be to catch every reader's attention in such a way that no one could possibly disagree with her or possibly agree with Montessori. This is an example of misusing the methodology of phenomenology, which legitimately provides individual perspectives on individual situations but does not provide adequate foundation for drawing general and vast conclusions about unobserved phenomena, certainly not without much greater research in primary resources combined with much more extensive observations. Had Suransky done more homework on Montessori's theory, the more pertinent direction of questioning why the disparity existed between her observations and Montessori theory would have emerged. But that was not the purpose of her research, which was to seek out specific examples which promoted her personal attitudes about the erosion of childhood.

Suransky offers us an example of some of the critics we explored earlier: a highly educated, obviously intelligent, professor of education who had a personal interest in furthering her own perspective on education. Rather than offering an honest examination into Montessori's pedagogy, she used Montessori as a backdrop for presenting her own ideas. (There is value in comparing, contrasting and judging educational ideology, of course, when it is presented as such.) Suransky, in the process of justifying her own theories, used highly inflammatory language to alert and alarm her readers ("subversive," "anti-norm," "organizational threat," "ideology of containment," etc.) while abusing the proper scope of observational techniques. That her attempt to generalize from her observations are so far off from Montessori may be an indication of a built-in limitation of phenomenology in drawing conclusions. Suransky's generalizations based upon inaccurate assumptions drawn from specific examples (which she may not have been able to view accurately because of her personal bias) make for exciting phrases but offer us no insight into the value of Montessori, though she does raise some interesting questions which would be worth directing toward Montessori theory.

The list of attacks I drew from her writings might be appropriately used to determine one's knowledge of Montessori {...answer "true" or "false"...} or even as an example of the difficulty transferring knowledge from teaching theory into practice; but they do not serve the interest of those in pursuit of knowledge concerning Montessori, as her work suggested.

To end on a more constructive note, I'd like to contrast Suransky's opinions of Montessori with one more quote from Riley Gardner, a psychoanalyst: "To me, one of the most valuable aspects of the Montessori method and the psychotherapeutic methods I alluded to is the latitude they provide for active coping behavior. ... The American child is too often inhibited by situations in which his spontaneous activity can be held to a minimum."(445)

5.3 Rita Kramer

Rita Kramer wrote a biography of Montessori entitled, MARIA MONTESSORI, published in 1976. This is an extensive work, which provides tremendous insight into Montessori's history and some very good insights into the history of the Montessori movement. Although Kramer does include discussion of some of the theoretical concepts, the purpose of her book is not to examine the theory. She does expose criticisms of Montessori and suggests which of those might be worth reflecting upon today. She provides valuable insight into those historical events which led to the translation of THE MONTESSORI

METHOD as a rigid and dogmatic system of education. "It was Montessori's conviction that her ideas would be distorted unless they were practiced exactly as she had translated them into the classroom, and while there was some justification for her fears of distortion and exploitation, of a cheapening of the ideas in the hands of those who did not really understand them, and used their name for their own purposes, the price paid for the purity gained through private institutionalization was a certain rigidity, sometimes even atrophy."(446)

The criticisms that I include in this section were provided by Kramer as descriptive criticisms, one aspect of a very thorough biography. I include them here because I feel they provide important perspectives on Maria Montessori the person and in the realm of those ideas which Montessori may have neglected. Regarding the first is a statement by Kramer about Montessori's change in personality from the young, innovative medical student: "Her sense of mission had overtaken her genius. She had gradually changed from a radical inquirer into a conservative who judged social conditions and political institutions primarily on the basis of whether they seemed hospitable to the practice of the method [Montessori] and spread of the movement she so firmly believed would ultimately transform both the individual child and human society."(447) Kramer also noted that it was only on the level of practical, mechanical detail that Montessori came to accept change or modification of the materials or methods. Once "she had established them to her own satisfaction. Eventually she came to feel that she had found what worked best on the basis of observation, trial and error, and proven results -- scientific pedagogy. No more changes were needed. Further modifications would only be distortions, deviations from the ideal."(448) Kramer pointed out what she perceived to be the central contradiction in Montessori's movement: "In the name of the movement dedicated to liberty, freedom, not only of action but of expression was being stifled."(449) And "Her belief in the scientific validity of her method explains her insistence that it not be misunderstood or misapplied. What it does not explain is her seeming failure to understand the nature of scientific knowledge itself, which is constantly changing as new discoveries supersede prevous ones. In the name of science she was acting like a true believer. And the religious aspect of the 'propaganda' carried out on behalf of the method did not even permit ecumenism."(450) Reflecting upon how similar the Montessori movement and the circle of fans which surround it were to a religious group, Kramer noted: "Nothing is as corrupting as worship -- unless it is being worshipped. It was Maria Montessori's fate that she reached a point at which she stopped growing intellectually and instead retreated into the church her disciples had built around her in the later years of her life. She never really confronted the challenges of new ideas in fields as close to her own as psychoanalysis, anthropology, and linguistics."(451) While it is fair to reflect upon how much any one individual can do in a lifetime, Kramer's points are well made.

The impression I received from my interviews with Lisl Barnett, Annie Hermann, and Emma Plank provided me with the sense that Montessori was very willing to let her fanatical followers protect her from the onslaught of criticisms and doubts. At the same time, Montessori, inadvertently perhaps, allowed those fanatics to create a sense of rigidity and dogmatism in the name of the Montessori method.

Kramer reflected upon Montessori's unwillingness or inability to analyze some of the new information the world was receiving in the form of psychoanalysis. Concurrent with Montessori's first visit to the United States, "psychoanalysis was beginning to reveal the role of instinctual drives and unconscious conflicts as determinants of behavior, and the way in which identification with nurturing adults was related to the child's view of himself and the world -- to the learning process seen as an aspect of personality development. These were concepts Montessori never reconciled with her emphasis on the child's 'spontaneous interest in learning.' Although she had anticipated the psychoanalysts by being concerned with cognitive developments before they were, she never really integrated the cognitive with the emotional aspects of development. The result was to leave her ideas seeming, in the light of later psychoanalytic ego-psychology, not so much incorrect as incomplete."(452) This is, perhaps, one of the points Suransky was trying to make in the criticisms we examined before. It is not entirely clear that this was Suransky's intention. Suransky's examples of what she saw to be particular teachers' inadequate responses to specific emotional needs and her basing conclusions about Montessori on these unresponsive teachers was the objection I was raising in her section. It is not true that Montessori did not recognize as important the emotional needs of the child. It is true that she didn't offer an adequate framework for interpreting those needs, and so, teachers without such a framework can rely too heavily on the security of the structure of the classroom, using it as an exo-skeleton to inhibit and deny growth.

Kramer made a strong case concerning Montessori's failure to specifically address the emotional elements related to learning: "It was no longer possible [during the turn of the century] to consider any aspect of human development without considering the influence of the way in which certain inevitable emotional conflicts arise and are resolved in the early years of life. A system that limited itself to the acquisition of skills -- formal education -- no longer seemed like a fruitful avenue for reform for education in its broadest sense -- the development of more creative individuals and a healthier society. Thus Montessori, who had begun by anticipating the psychoanalysts' discovery of the crucial importance of the earliest life experience in determining the course of later development, was now being left behind by them. For it was not only the senses and the intellect of the child that required proper early training; there was the matter of those feelings and fantasies whose hidden effects were now being explored in the work of Freud and his followers."(453) Kramer noted that Montessori included, perhaps intuitively, that the child's self-esteem is the ground work upon which all else is laid. She may have played down some emotional aspects of development, but she did create an environment in which that emotional development could be unusually free to emerge. Kramer suggested that though Montessori may not have been able to put this intuitive appreciation of the emotional needs of the child into theory, the system did not deny the opportunity for the expression of emotional needs and that Montessori recognized the importance of appreciating as well as responding to them.(454)

Finally, Kramer noticed "two characteristic limitations of Montessori's] thinking. For one thing, she minimized the role of the adult mind in her own system, the extent to which the adult prepared the environment, determined what the child would find there and how he would use it. For another, she missed the role the adult must play in any system, the fact that there is always a relationship. The child identifies, or he reacts against, but always he learns in an emotional context of his relationship with the most important others in his life -- his parents or those who come to stand for them. To say that 'things are the best teachers,' as Montessori liked to do, (because 'a man is not what he is because of the teachers he has had, but because of what he has done'), is to ignore a fundamental aspect of human development, which she does not ignore, in fact, but only in theory."(455)

Kramer offers us fertile questions. She challenges us to examine not only Montessori's system of education, but the way in which any teacher training achieves its purposes: How do we provide mass training programs which will enable intelligent sensitivity on the part of the teacher? Annie Hermann confirmed that Montessori shied away from questions raised by psychoanalysts. Hermann felt that Montessori's Catholicism especially hindered her ability to examine some of the questions about instinctive and sexual drives. On the other hand, two psychologists, one of whom is Maria Montessori's grandson, independently offer perspectives on how consonant Montessori's ideas are with psychotherapy. Riley Gardner, in an article entitled "The Psychologist Looks at Montessori" noted: "A common axiom about learning seems to guide [Montessori's] approach and the approach often involves effective psychotherapy. In psychotherapy, the patient is placed in the situation by which he may come into more effective communication with his ideas and feelings. The therapist, like the Montessori teacher, may intrude in a non-evaluative way, and then only when he deems it necessary." The implicit or explicit axiom about learning common to these techniques could be stated in the following terms: "Both the therapist and the Montessori teacher assume that optimal learning involves a special kind of personal change. This kind of self-instigated change has more permanent effects and is experienced as more real than any change one might try to impose from without. All effective learning involves personal change, and the most effective kinds of learning seem to be those in which the learner is the appreciator of the change and involves himself in active commerce with the learning materials."(456)

Mario Montessori Jr. noted: "In both the pscyhoanalytic and Montessori's approach, the relation of observor-participant and participant should be one of alliance based on mutual respect and confidence. The observor-participant should be carefully trained. He should be interested in the phenomena he is observing and understanding. He should allow situations to develop freely, abstaining from intervention when it not necessary, and acting appropriately when it is. His actions should be determined by the situation and its objectives, never by his own impulses or wishes, which might interfere with the process at hand. His aim should be to remove obstacles which inhibit the natural course of events, to promote insights, further it, and to help work these through. His attitude should be one of empathy, cooperation, and patience."(457) "Neither Montessori nor psychoanalysis tries to simplify or reduce the complexity of the picture of man to fit a special theory. Instead, both acknowledged the diversity of factors determining human development and behvior. They endeavor to cope with them in concordance with the findings obtained by observations of spontaneous behavior in especially prepared setting. The situation in both cases is so structured that it activates certain aspects of behavior that would not otherwise manifest themselves with the same clarity and continuity. This makes it possible to study phenomenon not noticed before."(458) My conclusion is that while Montessori may not have fully discussed the value of emotional needs on a theoretical level, meeting them tended to come quite naturally to her, and that her theory is not seriously in conflict with those which would include more prominently valuation of the emotional developmental aspects of the child.

6.0 THE CHILD'S EXPERIENCE -- A DESCRIPTION

We have examined and explored criticisms which have been directed toward Maria Montessori's educational pedagogy. I have attempted to provide detailed, integrated information about Montessori as a juxtaposition to those criticisms. In this chapter, I will describe a well prepared Montessori environment. I will elucidate how Montessori's approaches and theories come together in a real classroom situation. Obviously, this description is of an ideal learning environment. The environment and situations I depict here do actually exist, but they are what I consider to be the best of Montessori. There is no way to be completely thorough here; nor do I want to suggest that my description excludes other opinions of what might be considered better. I have outlined the chapter in this way:

- 6.1 A Classroom Description
    - 6.1.1 Practical Life
    - 6.1.2 Sensorial area
    - 6.1.3 Language
    - 6.1.4 Math
    - 6.1.5 Cultural experiences (history and cultures of man, art, music, geography)
    - 6.1.6 Science
- 6.2 New Class
- 6.3 Growing, Established Class, New Year
- 6.4 Day-to-day Description
- 6.5 Some Additional Considerations
    - 6.5.1 hours in the school day
    - 6.5.2 teacher/student ratio
    - 6.5.3 the outdoor garden, "other-than-basic-classroom" learning environment
- 6.6 Conclusions

6.1 Classroom Description (The Prepared Environment)

This is a description of the basic "Montessori materials" for a preschool learning environment. Montessori has detailed materials for elementary school as well, and has provided some general guidelines for junior and senior high. It is important to know that this comes close to a comprehensive list of materials, which would never appear in the classroom all at once. Materials are rotated in and out of the room in increasingly more complex progressions as the children's capacities within the classroom develop. In most cases, the materials within one category, i.e., Practical Life, are physically grouped together within the room.

6.1.1 Practical Life

The purposes of Practical Life are varied:

1. To aid the total growth and development of the child with the emphasis on the word "life" and not "practical."
2. To aid the harmonious development between mental and physical components of the child. Specifically, this means aiding the development of control and coordination of movement, i.e., eye-hand, hand-mind, body-mind interactions.
3. To aid the development of the ability to concentrate.
4. To aid the development of intellectual and social aspects of life.
5. To aid the development of independence, self-sufficiency.
6. To aid the development of self-control, self-discipline.
7. To encourage gradual perfection of movement through repetition and growth of concentration.
8. To increase self-respect and self-esteem.
9. To aid the harmonious regulation of a child's life in society.
10. To increase independence through acquisition of self-care skills.
11. To develop habits of order and work.
12. To provide necessary order and structure; improve motor behavior, coordination and body imagery.
13. To assist the child in developing concepts related to the logical sequencing and order of activities, as well as cause-effect.

Practical Life exercises include those materials which will help the child deal independently and competently in his/her daily life. These include what might be known to adults as "chores," and are designed as real exercises within an actively engaging learning environment. Also included within this area is what Montessori called "grace and courtesy lessons, lessons which encourage children to become aware of their options in learning to live with each other as well as those behaviors which are considered appropriate within a given culture. Two very special, extensive activities that are singled out, though they relate to other aspects of Practical Life, are "the silence game" and "walking on the line." These are categorized together as "Analysis and Control of Movement" for teachers. In addition to these, the "constructive arts" (arts and crafts) would be included in this area of the classroom. The lists below are adequate but not exhaustive. Remember that the goals of each task are far more involved than the obvious one at hand. Also, the Practical Life materials within different cultures will vary signficantly because the activities are pertinent to daily living in one's own culture.

Below are some detailed lists of the five divisions found in the Practical Life categorization of the classroom.

1. Care of the Person:

Any activity which affords the child the opportunity to care for oneself: This includes learning to wash hands, especially before meals and after going to the bathroom, combing and brushing hair, brushing teeth, perhaps gargling, blowing one's nose, cleaning nails, brushing clothes, folding clothes, hanging up clothes, dressing and undressing, putting on or taking off (hats, caps, snowpants, coats, shoes, stockings and socks, gloves, aprons, sweaters, etc.) cleaning and polishing shoes and boots, using a doormat, keeping hands away from nose and mouth, and keeping one's hands to oneself.

2. Care of the Environment

Any activity within the classroom which helps a child learn to care for his/her environment. These include: pouring exercises with glasses, cups, pitchers, vases, basins (going from pouring beans to rice to water), rolling up mats, cutting activities, peeling activities, food preparation activities, carrying different objects in the classroom, picking and putting down objects. Indoor activities include pushing in tables, putting away equipment after use, dusting, sweeping with a broom, dustpans and brushes, washing furniture, shelves, waxing and polishing furniture, washing windows, polishing mirrors, washing towels and dusters, ironing, folding, washing dishes, polishing metals such as silver and brass, sponging up spilt liquids, laying a table for a meal, clearing a table after a meal, packing a picnic basket, opening a book, turning the pages of a book, returning a book to a bookcase, arranging flowers, caring for plants, and caring for animals (which may be indoors and outdoors). Typical outdoor exercises would include sweeping mats and sidewalks, shaking dusters and rugs, caring for a garden (which would include weeding, plucking dead leaves, raking, hoeing, digging, watering, etc.), gathering wood, perhaps (if wood is a source of fuel for the classroom), if appropriate, gathering fruits and vegetables, collecting eggs (if you're lucky enough to have chickens in your school), appropriate ways of caring for gardening equipment, especially rakes.

3. Grace and Courtesy Lessons

Those activities which encourage awareness of options for behavior in social situations. These presentations can be done in small groups or with the whole class, allowing presentation and learning of an appropriate social response as an opportunity to become aware of choices when dealing with other people. It is especially appropriate to note here, although it is true of every other aspect of the classroom, that the presentation of an exercise is separate from the need to use it. For example, a teacher would give a grace and courtesy lesson in how and when to say "excuse me." It is not taught as a correction while a child is engaged in a social activity. This separation of lesson from need to know and use a specific behavior allows for optimal self-respect, self-reliance and concentration. The emphasis is always on the child's increasing ability to make good choices for himself. Grace and courtesy lessons are typically lots of fun and dramatized in order to make the point and still involve children in the activity. In this way, grace and courtesy is seen as a good and fun option rather than a demand being made by some adult. Included in this category would be: greeting people, i.e, shaking hands, bowing, courtseying (if in a culture where appropriate), thanking, apologizing (how and when), offering something to someone, offering something sharp to someone, inviting someone in, knocking on the door, receiving a visitor, standing up when older people approach, letting someone pass, learning how and when to say "excuse me," asking someone permission to pass by, asking for something, interrupting other people when necessary, speaking softly, knocking at a door and waiting for permission to enter, watching others work without disturbing or interfering, walking without stepping on other children's mats or work, waiting for turns, picking up something someone has dropped and returning it to the owner, asking for help, borrowing or returning (never personal articles like combs or brushes or hats), covering a sneeze, yawn, or cough, helping others when they spill or drop things, holding the door for others to pass through, carrying messages - verbally or written, accompanying others (particularly smaller children), walking in processions, crossing roads, walking along the road, entering and leaving a room, walking up and down stairs courteously, not passing others, knowing when it is all right to run, learning social forms of one's country as well as of other cultures, learning how to move without touching one another, table manners, i.e., serving a meal or refreshments, eating quietly, not talking when the mouth is full, drinking quietly, using forks, knives, and spoons properly, what to do at the end of the meal, folding napkins, etc.

4. Analysis and Control of Movement

Though every Practical Life exercise could legitimately be considered under this heading, Montessori set aside two very special and extensive activities which progress during the course of the schoolyear as the capacities of the children progress. These two series of exercises are particularly intriguing and challenging for an educator to analyze as well as for a classroom of children. A "good" teacher would be able to evaluate many specific details about the growth and development of each child through observations of each child engaged in these activities. Actually, this is true observing any activity in which the child is engaged.

a) "Walking on the line" is a series of exercises initially centered on an elliptical or circular line marked out on the floor somewhere in the classroom. There are progressively more difficult activities, which begin with a child carefully walking (alone, in small groups or with the entire class) one foot in front of the other, on the line. As control of movement increases, new challenges are added to this activity. For instance, walking while holding a flag and trying to keep the flag still, holding a glass with progressively higher levels of water in it without spilling, etc.

b) The "silence game" is one done as a whole class. Its purpose is to offer children supreme challenges in control of movement as well as appreciation of what the experience of silence has to offer. The children, after gathering as a group, are called by name in whispers (by the teacher or another child) to walk as silently as possible from his/her position to a point somewhere else in the room. The children gather together, waiting silently until the entire group has been called. The process is reversed and the children are called back to their original positions. As the year progresses the children are capable of achieving greater self-control and greater silence, so that the focus turns to what the children in the classroom heard during their period of silence, or of what they became aware, etc.

5. Constructive Arts (arts and crafts)

This area includes all those arts and crafts activities we would normally expect to see in a preschool classroom: cutting, pasting, gluing, painting, clay modeling, free-hand drawing. The important point to remember here is that the skills required for complex art activities would be subdivided and turned into individual exercises first during the first part of the year. For example, knowing that a child needs to use scissors in a number of ways within the classroom, particular exercises would be set up during the course of the year including: cutting with scissors with rounded points, carrying scissors, cutting with scissors with sharp points, cutting string on parcels, cutting flowers, cutting paper, cutting dried twigs and leaves off plants and flowers, cutting mats for plates and trays, etc.

Competency in control of movement, self-discipline, developing the ability to concentrate on a particular activity and doing such an activity carefully are the basic requirements before teacher would begin to move a child into the other areas of the classroom. The Practical Life area is the foundation for all that is to follow and is the primary emphasis for the first year and well into the second year for most children. Children will begin Sensorial, Language, Math, and Cultural activities within the first year, but Practical Life is the mainstay of the young child's activities in a Montessori environment.

6.1.2 Sensorial area

Materials for the training of the senses comprise a series of objects which are grouped together according to some definite quality which they possess, such as dimension, tactile, chromatic, baric, thermic, gustatoric, olfactory or stereognostic. These materials continue to expand and relate to the skills being developed in the Practical Life area, continuing to refine movement, muscular control, lengthening concentration span, allowing the mind and body to work together. The Sensorial material works as a reference to the environment but that is not necessarily obvious to the child at first. Control of error in this area is less obvious. As in Practical Life, the perception of error oftentimes relies solely on the child's cognitive ability to recognize distinctions. These materials aid the child in developing the ability to perceive small differences utilizing all of his senses. These exercises involve mental effort, muscular control and movement, as well as requiring the ability to concentrate for progressively longer periods of time. The Sensorial materials organize stimuli into categories, as mentioned above, which help the child to organize his impressions by senses. Initially the materials are presented in isolation, but then are combined and eventually categorized. This list is categorized according to its main physical feature under the "sense" the exercise is primarily intended to assist in development:

Visual Exercises:

solid cylinders	Perception of Dimension
knobless cylinders	
pink tower	
long rods	
broad stairs	
color tablets	Perception of Color
geometric cabinet	Perception of Form
geometric cards	
superimposed geometric figures	
biology (botany) cabinet	
binomial cube	
trinomial cube	
square of pythagorus	
rectangular box of constructive triangles	
triangular box of constuctive triangles	
small hexagonal and large hexagonal and constructive triangle boxes	

Tactile Sense:

rough and smooth boards	Muscular-Tactile Discrimination
touch tablets	
boxes of fabric	
progressive exercises	
geometric solids	Stereognostic
mystery bag	
thermic bottles	Thermic
thermic tablets	
baric tablets	Baric

Auditory Sense:

Sound boxes
bells

Gustatory:

tasting bottles

Olfactory:

smelling bottles

Other activities in the class will be used to relate to these experiences. For example, cooking is a great opportunity to visually, tactilely, gustatorily, olfactorily and auditorily examine foods.

In addition to the Sensorial materials relating to the Practical Life exercises, these materials are designed to relate in very important ways to the math, language and reading areas. Montessori saw these exercises as indirect and direct preparation for later work though they were not conscious preparation to the child, necessarily. To mathematics, the Sensorial materials relate by providing impressions of "ten-ness" (most materials are in numbers of ten), impression of squaring and cubing, idea of quantity put into an order (grading), geometrical facts presented, names of shapes and concepts presented. The sensorial materials relate to writing by helping to develop pincer movement further, developing lightness of touch, and introducing tracing motion across a surface. It assists in the preparation for reading by helping the child to develop size and shape discrimination, through capacities for determining gradations, as well as matching sizes, and improved speed in discrimination.

6.1.3 Language

Included within this category are exercises which continue the development of muscular control and offer direct preparation for writing ability. The most significant aspects of the Montessori language are integrated into the every-day, every-moment, every-hour, goings on within the classroom. Those specific exercises listed before are only the very direct, precise preparations for reading and writing, but Montessori saw language as a much more vast realm within the classroom and promoted its use on every level. Language development is encouraged in the Montessori class partially through its total freedom of conversation, i.e., a child at any point has the option of conversing with any other child or adult. "Through this freedom, language becomes an integral part of the life of the classroom and there is a continuous encouragement of self-expression and communication."(459) Vocabulary is the second step in every exercise presented in the classroom from the very simplest pouring exercises. Once a child has developed a skill, words are related to it. Precise and accurate names are used for all the objects in the environment as well as in exploring concepts. In addition to the Practical Life and Sensorial areas as being preparation for this oral language, they serve to prepare the child's physical and intellectual needs and interests for reading and writing. Enrichment of vocabulary and oral language training includes discussions about pictures, exposure to songs, stories, poetry, a news period, question games, events, activities, show and tell, and vocabulary and experience games. Below is the list of specific language materials devoted toward the indirect and direct preparation for reading and writing skills:

-sand paper letters
-moveable alphabet
-metal insets
-handwriting
    -sandpaper letters and tray of sand
    -sandpaper letters and unlined chalkboard
    -sandpaper letters to organize letters by their initial strokes
    -sandpaper letters and lined chalkboard

- -lined board and one alphabet set of moveable letters
- -reference sheet of printed and cursive handwriting

-sequence and names of the letters of the alphabet
-practice in writing letters
-learning capital letters
-creative work as separate from level of perfection (writing)
-phonetic object boxes
-phonetic word cards
-phonograms
-puzzle words
-reading classification
-function of words:
  -the noun
  -the article
  -the adjective
  -logical adjective games and detective adjective games
  -the conjunction
  -the preposition
  -the verb
  -the adverb
  -the pronoun
  -the interjection
  -continuation of commands
-reading analysis
  -simple sentences
  -simple sentences with extensions
  -simple sentences with attributes
  -simple sentences with appositives
  (This is a system for diagramming sentences.)

6.1.4 Math

There are some interpreters of Montessori, Emma Plank and myself included, who feel that though Montessori had a tremendous amount to offer in the general area of educational materials, her true genius is expressed in her creation of math materials. She borrowed many concepts and materials; they are not all hers as original ideas, but her formulation and use of them, and creation of materials to allow a young child to move from the very concrete to abstract concepts in math are quite impressive. This may be because no one else ever attempted to provide the preschool child with such a comprehensive and concrete foundation in number concepts. Perhaps it is because most of us don't have fond memories of the tasks we were put to in exploring mathematics. In any case, below is a list and brief description of the materials found within the Math area:

1. Introduction to Numbers

This is a collection of materials which provide: empirical representation of numbers 1-10, the conception that collective numbers can be represented by a single object containing signs by which the relative quantity of unit could be recognized, numeration (counting objects), teaching the symbols for numerals, exercising the memory of numbers. The purpose and reasoning behind these materials are to provide the child with a firm foundation of the numbers 1-9 (since this is the basis on which all other math is built). These materials provide for the child's need to manipulate concrete materials with his gross and fine muscular movements.

-number rods
-sandpaper figures (numerals)
-number rods and cards
-spindles (introduction of the number 0)
-memory game of numbers
-cards and counters
-introduction to bead bars (one to nine)

2. The Decimal System

In this section, the materials are to provide: an overview of the decimal system, introduce the concept of place value, introduce the composition of numbers, present basic operations i.e., addition, subtraction, multiplication and division.

-introduction to bead materials (ones, tens, hundreds, thousands)
-introduction to numeral cards (1-9, 10,20,30, etc. to 90, 100,200-900, 1000,2000-9000)
-formation of complex numbers (combining above to make any combination, i.e., 3000 and 400 and 50 and 3 fit together to make 3453)
-mathematical operations with the bead materials and cards:
 addition (static first, then dynamic)
 subtraction (static and dynamic)
 multiplication (static and dynamic)
 division (static and dynamic)
-mathematical operations with the "stamp game"
-addition with the "dot game"

3. Teens and Tens (counting)

Although these materials are logically an extension of the Introduction to Numbers (1), and may begin long before the math operations in the decimal system are completed, the decimal system is frequently presented first as an overview before getting to these exercises. This overview from the decimal system materials cannot come before a basic introduction to numbers because a child needs a concrete basis for absorbing and being able to work with the decimal system materials. But once the foundation has been laid, the overview is presented. Lessons in this category would begin after the introduction to the bead materials is complete. The purpose of this set of materials and exercises is to explore quantity, name and symbols for 10-100.

-introduction of teens with bead materials only
-"teen board"
-"teen board" with beads materials
-"ten board" with bead materials
-linear counting: chains for squares and cubes of 1-9
-skip counting: using chains for squares and cubes of 1-9
-hundred board

4. Learning the Basic Equations

These are a set of materials which encourage memorization of the basic combinations (equations) involved in addition, subtraction, multiplication and division. The materials, which are extensions of the four processes learned earlier (through decimal system materials) becomes progressively less concrete, requiring more abstract cognitions.

-addition: positive snake game
addition strip board
addition charts
-subtraction: negative snake game
negative strip board
subtraction charts
-multiplication: bead bar layout (times tables without the tables)
ten times table
multiplication board
multiplication charts
-division: division board
division charts

5. Passage to Abstraction

These materials are designed to assist the child in his developing understanding of math processes, moving the child further away from the concrete to more abstract computation. These are extensions of Learning The Basic Equations (4), pursuing greater and greater abstraction abilities as its main function, where the previous set of materials was most concerned with learning the logic of the equations themselves. These materials are not necessarily presented before Fractions (6).

-small bead frame
-large bead frame
-short division with division boards
-long division with division boards

6. Fractions

These materials introduce quantity, name, symbol and introduce mathematical operations.

-sensorial exploration of the fraction materials (fraction insets)
-fraction insets: naming fractions
numeral association
equivalencies
addition
subtraction
-fraction skittles: multiplication
division

This list of math exercises represents the order and structure of mathematics. The exact order and structure for presentations depends upon the capacities and interests of the child. As is true of the other materials in the classroom (but so unlike math materials found in traditional classes), the math materials are quite beautiful and are enticing to most children. These materials are designed for a logical progression but are accurate enough to be of value when experienced in any order.

6.1.5 Cultural experience (history and cultures of man, art, music, and geography)

There is not a precise list of activities or materials found within this conceptual area of the classroom. There is great variation to be found from class to class. The realm of culture is to include: the study of the styles and habits that are particular to individual groups of people, the artistic and inherent vitalities of individual groups of people...this includes all those aspects of studying people, habits, their arts, stories, and lifestyles. The purposes of this section include: making sure the children become specifically acquainted with the way man has lived and lives now; making sure the children are aware of their world and have the opportunity to examine aspects of it; to understand the continuum of man, his social attitudes, to understand the concept that changes occur in some areas and that some elements are basic needs and tendencies of man; knowledge of specific histories, studying the feelings of different times, being aware of how the past relates to the present; developing a feeling for cultural means of expression: art, music, architecture, sculpture, etc., appreciating one's own means of expression; the study of geography and how it relates to culture, appreciating the fact that relationships in the world exist for specific reasons, including geographical formations and the circumstances of cause and effect related to climate, foods, shelters, etc., all helping to determine opportunities and limits on lifestyles; recognizing elements which require man to adapt.

In addition to the above, there are four specific elements which get classified under this category:

- -time: the concept of time
  learning to tell time
- -measurement
- -graphing
- -money

6.1.6 Science

The science experiments and activities in the classroom were not specifically organized by Montessori. The ideal would be to have a garden outside, or at least numerous plants inside, as well as a number of animals to care for indoors and outdoors. Having experiences related to caring for plants and animals should exist for the children In addition to this, the Montessori teacher is to bring into the classroom on a regular basis science experiments and activities related to physical sciences (including geology), botany, zoology, and biology. For initial geology exposure, Montessori developed a set of land and water forms. For the other areas of the classroom, she has set aside very few specific materials or lessons, preferring to keep that wide open to the needs and interests of the classroom.

This description of the prepared environment in no way gives an idea of how these materials function together or what the specific purposes and use of particular materials are. It is intended to help draw a mental picture of the classroom to keep in mind through the following sections which describe how the prepared environment interacts and functions as an element in the learning environment. It is important to note that Montessori felt that the prepared environment was secondary to the teacher and the child. One book which does an excellent job of describing the functioning of the Montessori classroom, for those who want a better picture of how this environment works, is Paula Polk Lillard's MONTESSORI -- A MODERN APPROACH. (see Bibliography). This list is an impressive one and can be easily misunderstood as being of primary importance to those not fully aware of their place in Montessori's overall pedagogy.

6.2 New Class - Setting Up

A basic principle of Montessori's is that the adult should assume, unless he or she knows otherwise, that the children know nothing. This means simply that unless that particular adult has engaged in offering that particular child the needed bit of information and has observed the child's capacity to integrate that in his or her life, the adult should assume that the child needs to be provided with the information. No knowledge is assumed. [The statement, "You should know better..." is considered useless and counterproductive.] When beginning a new classroom, a new school, a new year, this principle is extremely important.

Starting a brand new class, meaning that no class has existed before and all of the children within the classroom are "brand-new," is quite different from beginning a new school year each September. Ideally, the age-range of the children in a brand new class is not the typical 2-1/2 to 7 years, but rather 2-1/2 to 4. Typically, the class will be for a three-hour period only, unless the class has been structured in such a way to respond to needs for daycare (which will be discussed later). Also, the number of children within the classroom is smaller. Where a typical classroom might have 20 to 30, a brand-new classroom should be limited to 15. The reasons for these differences relate to the way an on-going classroom functions. In any given new

Fall period, there are usually only seven to ten brand new children joining a classroom. The classroom is comprised of 6 and 7 year-olds who have been in the classroom for two to four years and 3 to 4 year-olds who have been in the classroom for one to two years. This means that an on-going classroom has already established much in the way of routine, order, and structure. Because this order and structure is so vital to the classroom, it is important not to overwhelm a new class with too many brand-new children.

The first order of the day is to establish a sense of security, through order and structure, while providing the children with the beginning muscular activities which will eventually lead to control of movement and control of self, i.e., self-discipline. Typically, a brand-new classroom has absolutely nothing on the shelves on the first day. The children are taken through a number of physical activities, introduced to each other and to the teacher. There are lots of games and songs; much of the time is spent out-of-doors exploring the environment, learning to enjoy being together as a group. The details of where the bathrooms are, where the sinks are, dealing with the emotional trauma of being separated from parents, and the learning of basic large gross muscular skills are all established before any child is asked to be competent in using materials, even toys.

By the end of the first week, the class would typically have had "games" to learn how to carry a chair, carrying a table with another child, pushing a chair under a table after leaving the table, the procedure of getting and returning materials from the shelf, walking around mats, tables, chairs, groups, etc., carrying a mat, rolling and unrolling it, and the teacher will have established his or her particular procedure for getting everyone's attention (many teachers use a bell). By the end of the first week we do see some materials appearing on the shelves in the position where they will be found or those that fit in that category, which will be consistent throughout the year. Typically, we would find puzzles with knobs, sorting exercises with beans or buttons, stringing large bead activities, pegboard, and a couple of books in a reading corner (after learning how to handle books). The children would have gone through the entire procedure of deciding what kind of activity they would like to engage in, choosing a mat or a table for that work, getting out a mat if the work is to be done on the floor, and going to get the materials. After using the puzzle or toy, the child returns the materials to the same place on the shelf, remembering to push the chair in or put the mat back. The length of time spent during the day on doing individual exercises is very brief at first, beginning for five minutes, then ten, then fifteen, building up during the course of that first month or two. Though these procedures may seem dogmatic, they are done in a very congenial way and they provide the foundation for order and freedom. The structure of the classroom, i.e., how to use materials and return them, is an important foundation on which all of the other elements rely. Again, we must remember that this structure provides a sense of order and security to the young child and is not done in a repressive manner. The goal for those first few weeks is to make the children very comfortable and happy. Most of the time is spent in group activities, learning to feel comfortable with each other and oneself within the new classroom environment.

As the first month progresses, more and more materials appear on the shelves; and more and more time is devoted to children making their own choices about activities each would like to do in the classroom. Still, much of the morning, perhaps as much as half of the morning, is devoted to group activities: large muscular activities, the beginning of walking on the line, and story and song activities. The hope is always that September offers good weather so that a part of this time can be spent out-of-doors. As the children become comfortable with choosing materials from the shelves and the classroom settles down with a sense of purpose, allowing each child to decide for herself of himself in what he or she is interested, the teacher begins to make individual presentations in the Practical Life area. This means that one child will be addressed and invited to join the teacher for a presentation in pouring or whatever.

There is a transference of the child's direction of emotional needs from parent to teacher during this period and there may be lots of close physical contact. The child who needs it is comforted verbally and physically. During these first few months the teacher establishes her special relationship with the children, as a special sort of friend, a guide and introducer to exciting things in the classroom. At the end of the first month, almost all of the children are very comfortable coming into the classroom, being greeted by the teacher, greeting one another, and choosing their own materials for their activities. During the second and third months we find more and more materials appearing on the Practical Life shelves and a real settling in of the children in the classroom. This means that there is a new level of interest and concentration found among the children in the classroom. It may or it may not seem quiet in the classroom, that is certainly not the point or goal; rather, we would find children excited and engaged in purposeful activity.

All this idyllic talk does not mean to suggest that the classroom has not encountered any problems along the way. The normal disruptions and needs of children are certainly of primary concern. The basic routines of the classroom do not necessarily become established in one smooth continuum. There are ups and downs during the course of the day and course of the weeks. The routine, however, becomes established. Each child begins to learn to respect, or at least realize, that it will not be acceptable for him to interfere with another child. This means having to learn to wait one's turn for an activity or learning to keep one's hands to oneself when quite interested in the work of another child. These situation are dealt with sympathetically and sensitively by the teacher. The goal is to respect the rights of one child while maintaining the self-esteem of the other. Though Montessori could propose this principle, there is no way in a teacher training program to guarantee the development of those skills in a particular teacher. {The section on Montessori's description on the teacher (4.2), would be useful to reflect upon here.} By Thanksgiving there are usually some Sensorial materials on the shelves, because the control of movement and ability to concentrate are frequently of sufficient nature to allow movement into the more demanding areas of the classroom. Also, some beginning Math and Language materials will begin to appear. Meanwhile, the individual "work period," as opposed to the "large group organized activities" period now consists of a significant part of the morning, perhaps as much as two-thirds or three- quarters of the period. This is probably the most significant change and indication of the developing skills for concentration and making choices.

Though the two and one-half to four year-olds are primarily working on individual tasks which focus on their own needs and interests, the classroom is beginning to function as a community. This means not only that the children have an interest in one another, they are also becoming aware of the needs of their peers. In some cases this means helping other children spontaneously. Sharing books or sharing an activity would be signs of this. In most cases, it means that the rountine of the classroom is beginning to settle in and the children begin to assist each other in remembering the rules and routines of the class. The activities which, at the beginning of the year, were large group activities are still apparent in the classroom in small group or individual activities; for instance, songs and stories may still exist as a full group activity, but they will also occur in spontaneous informal groupings of children.

By the end of this first year, perhaps only half of the shelves in the classroom have been filled: the Practical Life shelves are full, the Sensorial shelves are probably full, and half the Language and Math materials will be out on the shelves. The growth from September to May has been significant, and these children will be the returning children for next year's Fall class as the established children who will assist the new ones in learning the order and structure of a Montessori environment. As they have learned to help each other during this first year, most of the children will function more significantly as "teachers" of the new group who will join their class.

6.3 Growing - Established Class

Now we have our core group of 15 who have spent a year in the classroom as described in Section 6.2. The next Fall, five to ten new children will join this group. They will be initiated to the classroom at different times than the "core" group. There are innumerable options for "phasing in" this new group of children, both in timing and method. One option is to initiate the new children at different times during the day than are used for the "core" group. Another is to start them earlier in the year, sometimes two to three weeks before the "core" group comes back to the classroom, to establish the order and structure routine. Sometimes the established group comes in on their own for a few days to be reminded of the classroom's order and structure after a summer's break, sometimes they simply come and join the new children so the new children have an opportunity to participate in the re-establishment of the procedures as a comfortable way of repeating what will be expected of them in the classroom. In any case, the returning children are capable of "reviewing the basics" in a more concentrated fashion than is true of the new children's "initiation to the basics."

Now the situation with relation to the materials available on the shelves is quite different. We have a group of brand-new children who have, perhaps, experienced some time by themselves adjusting to the classroom, and we have an established "core" who will need a few weeks to re-establish themselves with some of the basic materials in the classroom, but who will come, in very short order, to be ready to get back to some of the more advanced activities they were working on during the previous school year. As is true in everything else I'm describing on this section on the child's experience, the teacher's options are wide open and what I view as ideal is not necessarily the ideal situation to another observer or educator. I have noticed that the most easily settled groups are those where the whole group, new and established, is kept active and enticed by large muscular and large group tasks for as long as possible so that the new group becomes secure and established in the classroom before many classroom materials are brought in. All of the children receive the benefits of taking the time and energy to allow a cohesive, settled, and secure group of children to develop. There need be no rush to the materials, though great care must be taken to avoid the development of boredom or impatience. I have observed that when this initial period is done successfully most everything that follows goes smoothly. (It's like parenting techniques: if you get off on the right foot by establishing the ground rules adequately the first time, you save yourself a lot of grief and energy later.)

The rest of the year is pretty much the same sort of progression described for the new year (described in 6.2) except that the established children will be getting further along in the materials. The age range in the classroom has been expanded by an extra year or two, so new, special elements of children relating together are commonplace opportunities. For instance, we now have two to five year-olds in a classroom and eventually two to seven year-olds, so the age range offers experiences which would not exist in a classroom of children all the same age. An example of this is that a 2-1/2 year-old might observe a 4 year-old doing the puzzle map of the world, relating it to a globe in the classroom. That 2-1/2 year-old may be very intrigued and enticed by such material and choose to go and observe more closely what the 4 year-old is doing. On a different level, opportunities for helping and working together as a community functions beautifully with the larger age range. Instead of having 30 children competing intellectually and muscularly for the same materials, they are providing each other with enticements and new perspectives which come to children at different developmental stages. The Montessori teacher, who is not available on a minute by minute basis to every child in the classroom, relies on this age difference to satisfy some of the needs for assistance at all levels of the classroom. This is one hundred percent positive. It's not that the teacher is unavailable, it's that the classroom is filled with children who are capable of going beyond their own needs to assist other children. Montessori recommended large numbers of children in a classroom per teacher in order to protect the children from the teacher! Her point was that children can meet each others' needs on many different levels, that not only do adults interfere with allowing children to reach within themselves to find the capacity to help, but also that a five year-old is quite likely to understand the confusion of a two year-old much better than a 35 year-old teacher might! Young children thrive on productivity and a sense of usefulness. The opportunities for these are abundant within the Montessori prepared environment. The insight that it is the teacher who learns best of all serves the entire class of children because everyone functions as teacher on various levels at various times.

Again, this description starts to sound as if it is too good to be true. I don't want to leave the impression that there are no difficulties or real-life problems in a Montessori classroom. What I do think is significant is that the problems are dealt with in a very logical, sensitive, caring way, and, as a result of meeting the needs of individual children, the problems tend to dissipate and become fewer and fewer as the class year progresses. Obviously, the children bring with them their own sets of environments, needs and difficulties, and the classroom's ability to provide for these is limited to the capacities of the children and the adults within the learning environment. The key responsibility, once again, falls upon the teacher, as is true in every other system of education.

6.4 Day-to-Day Description

On a day-to-day basis the classroom appears to be a relatively smoothly functioning community of children. At the beginning of the day, the children come in as they are dropped off by their parents and are greeted by the teacher and other children. Some of the children have things to share with each other or their teacher, many of the children already have in mind some piece of equipment or material with which they would like to engage and are anxious to get right to work. There tends to be very purposeful activity from the first moments of the day because the children are fresh and excited about coming to school. We would see a normal range of activities. Most of the new children would choose materials to use alone or perhaps next to another child. Many of the four and five year-olds would be choosing materials in which they can join two or three friends. In one corner might be a group of children sitting around one of the readers in the classroom, listening to stories being read. In another location there might be a snack table where two children are engaged in eating snack together, enjoying each other's company. After completing the snack, they will put away their dishes or perhaps wash the dishes, dry them, and put them away for the next child(ren) to use. As we scan across the classroom, there are mats on the floor with children working. Some children sitting down and some are spread out on their stomachs or backs engaged in activity. Some children are sitting at tables, some are walking around. A few might be "walking on the line" with a glass of water or a flag, or some such item challenging oneself or each other to maintaining greater and greater control over one's body. One child might decide he or she is interested in listening to a record or tape, go over to find the record or tape and put it on the machine, which is at the children's level. In a young class, most of the materials we would see being used would be Practical Life and Sensorial materials. In an established class we might see the whole range of materials, from simple pouring exercises to advanced analysis of the grammatical composition of a sentence. Within the classroom the two year-old child is free to observe the six year-old, and the six year-old is free to engage in an activity with the two year-old. The options are open. The rules which limit their choices are based on safety and respect for each other. The teacher or teachers are most likely giving individual or small group presentations or standing back to observe the goings-on within the classroom. There is most likely a general hum in the classroom. It is not necessarily a quiet classroom. It is an active, involved group of children, most of whom are actively engaged with some exercise. Some children may not be involved in any apparent activity. The educator's skill is required to ascertain sensitively which of these children need some encouragement or direction and how best to provide it. Sometimes a child becomes distracted by the noise level in the classroom and goes to find the teacher's bell to ring it in order to gain the attention of the class. He or she makes a personal request that everyone use softer voices so that he or she can concentrate better on his or her work.

There is often a quickening pace, for lack of a better word, that occurs during mid-morning when the children start to appear restless. The materials which they choose at this point tend to require less concentration and a shorter period of time in which to complete them. It seems to be a time during which children are taking a breather and, while they are not yet ready for a complete break, they are in need of a brief change in pace. Sometimes teachers interpret this period as the time to stop the "work period" for the day and bring the children together as a group. Montessori encouraged teachers to let the children move through this period. She found that this was often a temporary release before children engaged in their deepest, most intense and involving activity of the day, and that those teachers who routinely interfered with this period by breaking it off never allowed the child or the classroom to experience this deep level of concentration and activity. It is not necessarily a bad time to help the children make some sort of a break, as long as it is not required. For example, it might be a good time for the teacher to ring her bell and ask that those who need a break to quietly push in their chairs, put their work aside for a moment of directed gross muscle activity like walking through the classroom, or walking through the classroom shaking hands, or moving backwards without bumping into anything, etc. The emphasis is on control-of-self in various forms of challenging motion. The teacher will redirect the children back to their work and let them move on for the rest of the morning by bringing the movement activity to a close, helping the children to refocus their energies on their individual or small group activities. No child is required to participate. If the activity is interesting enough those children who need it will choose to join in.

At some point during the morning there is traditionally an all-class, sit-down period. It's not clear to me whether this is something to which Montessori would subscribe, though she discussed a number of activities which are appropriate to do as a complete group. It is certainly not inappropriate to sing songs and read stories together as a class, though the emphasis must be that these activities include all of the children in the group. It is a good time in which to engage in "grace and courtesy" activities or to discuss plans for the following day.

Many teachers choose to give new material presentations to the whole group. There are several problems with doing so. First of all, only a limited number of children within that group are ready for any particular exercise. Secondly, since there is usually only one of each exercise available in the class a large number of children are left to wait long periods, perhaps days, to use that particular material. Also, observing new lessons requires careful concentration focused on an activity on the part of the children, and presenting a new lesson requires adjusting the lesson to the needs, interests, and learning abilities of the observer on the part of the teacher, none of which are reasonable expectations for a large group situation. Large group activites should be those activities which involve all of the children. It is perfectly appropriate to present something that everyone must know about or will affect everyone such as introducing a new pet or discussing a field trip coming up. Dramatic activities in which all of the children participate, songs, dances, etc. are obvious choices.

Margo Waltuch, an A.M.I. (Association Montessori Internationale) consultant, who gives regular workshops on Practical Life, reminds all of her groups that for Montessori the line was for moving, not for sitting. The point she makes is a reminder that the children's purposes and needs do not relate well to spending long periods of time in the immobile sitting position. "Walking on the line" [6.1.1] is something that may be done as a whole group. We might see 20 or 25 children concentrating on putting one foot ahead of the other, slowly and carefully, some of whom might be holding objects, trying to control body and object together in increasingly more difficult and challenging ways. Group time is an opportunity for the "silence game," a challenging activity which requires participation as a group as well as individual functioning.

During the normal course of the day, the exercises in the class such as dishwashing, snack preparation, the serving of food and so on promote role playing activities and cooperation among the children. "Grace and courtesy lessons" for teaching those behaviors which each culture expects of its members--in which the teacher and children dramatize real-life situations, conflicts, and potential solutions--are a regular part of the curriculum. Stories, dramatizations and other role-playing activities occur for groups of various sizes on a regular basis. Ideally, the teacher is tuned-in to the emotional needs of her students and offers a variety of opportunities for self-expression and self-exploration on an individual, small-group and large-group, non-threatening basis.

Once again, the success of the classroom--the relationship between teachers, children and the prepared environment--depends "on the teachers' ability to choose new challenges [for each child] wisely. They must use their powers of observation, their knowledge of sensitive periods, and their understanding of the Montessori material. They must direct the children, but on the basis of their own observations of the children's needs. In this sense, it is the children who must direct the adults ... the adults and the children work together to further the children's development. Thus, both are directors and both are directed."(460)

Other happenings in the classroom which might be observed on any particular day would include those problems which normally arise among children. The teacher must be very careful and sensitive not to interfere or interrupt until it is clear that her guidance is required. A child who is having a problem is assisted, not accused; but the problem should not be avoided either. If discussion is necessary it would be done at a time and in a manner and place most appropriate for the maintenance of self-respect for all of the children involved. The teacher's perspective comes from concern for what each child needs rather than that he is doing something right or wrong. Obviously, there will be situations where rapid intervention is needed to interrupt a potentially hurtful or unsafe situation. Priorities for who requires what first demands sensitivity and great skill on the part of any educator. This positive way of approaching education empowers both the children and teachers to focus on optimal growth and development.

6.5 Some Additional Considerations

A few diverse topics remain to be addressed. Below are some brief examinations of the following topics:

6.5.1 The Hours in the School Day
6.5.2 Teacher-Child Ratio
6.5.3 The Outdoor, "Other-than-basic-classroom" Learning Environment

6.5.1 The Hours in the School Day

There is no general agreement on what would be the ideal Montessori school day. In my personal interviews, the recommendations ranged from three hours to all day, with all sorts of options inbetween. Montessori's original task was to provide an environment for children whose parents worked all day. An increasing percentage of parents need this all-day option. The essential point that each of my interviewees made was that, ideally, the young child needs to spend most of this or her time with his or her own family. No one felt it was ideal that a child be dropped off at 7 a.m. and picked up at 6 p.m. On the other hand, there was great appreciation for what the Montessori environment offered each child regardless of how many hours was required. In all cases, spending some time in this learning environment was considered preferable to staying at home all day. The principles of Montessori are applicable to the home environment as significantly as they are to the classroom.

In discussing the three-hour morning session most common for two and one-half to five year-olds in the United States, Emma Plank recommended expanding it to include a lunch period. She felt the optimal time period should include the great joys and pleasures which the children experience when preparing and sharing a meal together. Each of my interviewees felt the Montessori environment was an ideal one for as many hours as was necessary beyond a half-day and that individual circumstances rather than dreams of an ideal situation often dictated the length of the day. When Montessori teachers in the United States have their preference they usually plan a 3-hour morning session for the two and one-half to five year-olds, extended to the mid-afternoon for five to seven year-olds.

6.5.2 Teacher-Child Ratio

There are many differences of opinion about what Montessori suggested for a classroom teacher-child ratio. In some of her writings she suggested that one or two adults were completely capable of totally satisfying the needs of 40 to 50 children. And there are Montessori teachers in some parts of the United States and other parts of the world who attempt to maneuver everything on such a grand scale. In my interview with Annie Hermann she provided some rational perspectives on evaluating staffing ratios. Her analysis was that 20 to 25 children in one classroom was plenty large for a group of pre-school children. There was no advantage to having larger groups of children within the same classroom with more adults because too many adults required that the individual child learn to relate in too many diverse relationships. Hermann noted that Montessori didn't think in terms of the teacher responding to the emotional needs of the child as much as we have come to appreciate the need for this today. The classroom, which is ordinarily the first steady environment outside the home, should be one which provides support and comfort to the young child. A classroom with large numbers of children and/or a huge physical space requires unnecessary and immense adjustments on the part of the children and interferes with their ability to progress. The economic limitations of any given school often determines the child-teacher ratio. It was not clear to Annie Hermann whether Montessori's exclamation about a teacher being encouraged to handle a large class size was actually the ideal or rather the acceptance of monetary restrictions. Because of the way the Montessori environment is structured, Hermann felt it can cope with larger numbers of children better than most.(43)

Montessori spoke of limiting the number of teachers within the classroom in order to protect the child from the teacher. She was emphasizing the tendency of adults to interfere with the learning processes of children and that a large classroom of children made it less likely that the teacher would be able to do so. In addition, the children learn to be more self-reliant as well as to use each other to resolve questions and dilemmas, which is far preferable to seeking out a teacher for all questions and problems.

The classroom Montossori described did have a number of support personnel, including a nurse, a cook and a number of teachers-in-training who, while they may not have been actively involved in the details of the classroom, did provide assistance and additional adult contacts with the children.

Ideally, the specific teacher-child ratio should be flexible according to each specific class of children, taking into account the preference and capacities of the teacher, the ages aud classroom experience of the children, specific needs of individual children and so forth. As usual, there is no absolute resolution to this question. (Nor should there be.) But there are very real limitations to classrooms which are too small. Maria Montessori found, and many other Montessori educators concur, that less than 22-26 children in a class often required more energy and input from the teacher because there were too few children to interact and stimulate each other at the various age levels in the normal grouping combinations which naturally occur. Because no more than one-third of the class is new each September, and the older children are capable of directing much of their own activity, the teacher and children are not overwhelmed by what sounds like a large pre-school group. Special physical, social, emotional or mental needs of specific children may require smaller numbers, but in general a larger group enables the children to interact on more meaningful levels.

6.5.3 The Outdoor, "Other-than-basic-classroom" Learning Environment

Montessori spoke and wrote of a physical learning environment which included free access to the outdoors. Rambusch described it in this way: "Ideally, the class for the younger children would open out onto a garden, so the children could go out-of-doors to continue their occupations. There should be flowers and vegetables, some play equipment for their large muscles, and a place to sit and commune with nature if that is what the child feels in need of."(461)

In my interview with Lisl Barnett, she explained that this garden space was where the sand and water play, large blocks, balls, painting, etc. existed. Schools which don't have access to this sort of arrangement need to accommodate for the needs for these activities in some other space inside.(43)

6.6 Conclusions:

I thought including a chapter on "The Child's Experience," and trying to provide an impression of an on-going classroom situation would satisfy my need to provide the reader with a better picture of what happens inside a Montessori classroom. In fact, the more I wrote, the more I realized how much my description leaves out. The possibilities are vast. I hope that I have brought the reader a bit closer to being able to imagine what goes on in a Montessori learning environment nonetheless. There is simply no way of providing a complete picture of how any class functions. And each class is different. As Margo Waltuch exclaimed in my interview: 'Don't try to theorize, don't try to discuss Montessori...go see a good classroom for yourself.'(462)

The question of what is a "good Montessori classroom" is an important one and not so easy for the "uninitiated" to ascertain. So, in hopes of encouraging every reader to go out and observe, I have collated a list of observation details to be aware of when visiting a classroom. This can serve as a guide to determine at what point along a continuum of options any particular classroom satisfies the tenets of what might be called a Montessori education. Observing a classroom is the only way to get a perspective on how well Montessori's theories may have been translated into any particular environment. Certainly a wide range of legitimate options is open to each teacher, and the capacities as well as limitations of that teacher and group of children will determine many aspects of the learning environment. Monetary considerations, school philosophy and parental demands also effect the total picture. Remember that the physical environment, including the learning materials, though important are the least important aspect of the learning environment. The teacher and his/her ability to relate to the children are the most essential keys. The ability to bring vitality to the materials and share the wonders of the world are far more important than the specific details of the specific materials. Keep in mind that these details should be appropriate for the needs of specific age groups; for example, the size of furniture for three year-olds.

Use this list while keeping in mind the appropriate theory behind the specific elements of a Montessori learning environment:

Suggestions for Observation (463)

The Classroom

-size

-arrangement: amount of free floor space, storage, shelving

-lighting, accoustics, temperature

-furniture: kind and arrangement

-plants and pets

-safety precautions

-washroom facilities

-locker arrangements for personal belongings

-proximity to outdoors, access to outdoors

-tidiness and cleanliness

-overall attractiveness

Apparatus

-kinds and amount of "Montessori apparatus"
-"non-Montessori material" (puzzles, games, etc.)
-art equipment
-material for manual training
-availability of materials, accessibility
-state of repair
-state of cleanliness

Children
-number and age range
-number and age range of boys/girls
-number of children with special needs and/or gifts

Activities
-group work
-individual work
-art, music activities
-science
-foreign language
-story-telling, dramatics
-what other activities are available

Behavior (what seem to be the characteristics of the class as a group and the children as individuals)
-happiness
-concentration abilities
-cooperation

-independence

-orderliness

-helpfulness, friendliness

-self-discipline

-obedience, levels of

-mutual respect

-freedom

-the opposites of all of the above

When Observing One Child Carefully:

-When does he/she begin to work?

-What work does he/she choose?

-How long does he/she work at one activity?

-Does he/she repeat an exercise?

-Does he/she complete his/her work?

-Does he/she overcome difficulties or give up?

-When is he/she helped?

-When does he/she request help, and from whom?

-Does he/she work on his own initiative?

-Is he/she interested in what he/she does? (vs. listless activity)

-Does he/she work mostly alone, or with others?

-Does he/she help others?

-How does he/she get along with other children?

-Is he/she happy? (What about the other "Behaviors" listed above?)

-Does he/she cooperate with the teachers?

-Is he/she careful in his work?

-Does he/she show progress from day to day?

-Is he/she careful in his/her work?

-Does he/she have any special characteristics? Are they utilized in the best possible way?

Schedule

-Is there a planned schedule...does it work?

-Coming into school...

-Work period

-Refreshments

-Group lessons

-Outdoor activities

-Leaving-taking

-Are the above elements structured in an orderly, productive fashion with flexibility for individual needs and specific circumstances?

Teacher and Assistant(s)

-Teacher's relationship with the children:

  -How does he/she keep discipline? Is he/she reasonable? Firm? Consistent?

  -How does he/she show interest in and affection for the children?

  -Is he/she aware of all that is going on in the class?

  -Does he/she seem to enjoy teaching?

  -When does he/she encourage, assist, interrupt, interfere?

-His/her teaching:

  -Does she/he speak well and carry her/himself well?

-Is he/she interesting?

-Is he/she industrious? Patient? Neat? Purposeful? Respectful?

-Does he/she give clear lessons...are they of appropriate length, style, etc.?

7.0 CONCLUSIONS AND PERSPECTIVES:

Contrary to the opinions of many of her American critics, Montessori has become a very real influence in the educational sphere throughout the world. The decline in interest in the United States between the 1920's and late 1950's did not occur in the rest of the world. Perhaps this is because North American parents were being offered exciting and innovative Progressive education ideas whereas in Europe and elsewhere they were still limited to what had become old, traditional or rigid Froebelian kindergarten ideas. Montessori education experienced a decline in Europe preceding and during the World Wars, however, when Montessori education was seen as a real threat to the fascist governments claiming power. Lili (Roubiczek) Peller, Lisl Barnett, Annie Hermann and Emma Plank were among those forced to leave Vienna when the Nazi's moved into Austria at the end of the 1930's. Montessori's books were among those banned and burned.

UNESCO's 1958 world survey of education listed Montessori as an officially recognized form of education in over 40 nations. I encountered four Ph.D. dissertations which address many of the elements related to the rise and fall and return of interest in Montessori in America: see Bibliography for Phyllis Appelbaum, Mary

Leonard Fugina, Jean Ann Keough, and Lorene Kirley Wills for more details and perspectives.

It is difficult to understand the antagonism with which American professors of education received suggestions of Montessori's ideas. This was in striking contrast to the reactions of teachers in the field and of educators from other countries, many of whom seemed more willing to examine the value of Montessori's ideas without concern for what they had personally promoted before. Keough, in her dissertation "American Writings on Maria Montessori: An Inquiry into Changes in the Reception and Interpretations Given to Writings on Maria Montessori," suggested that part of the problem stemmed from Montessori's wider perspective on education: "Montessori's San Lorenzo [location of the first Casa die Bambini] venture was involved with medicine, hygiene, sociology, and architecture, as well as with schooling, psychology, and religion."(464)...[Montessori's view was] "that education is so much more than schooling and subject matter that to assess only the classroom portion of Montessori's scheme is to make the mistake of writing house-history..."(465)

Keough went on to note: "A second matter which apparently was not clear to many writers in either period [1910-1915 and 1958-1970] is the presence of an invisible curriculum in Montessori education. Deweyans, of all people, should have seen this, because it consists of learning what one is doing--not merely learning ABOUT what one is WORKING WITH, as critics from all sides charged. The hidden curriculum is a program of enhancing self-concepts, enlarging the sense of competency and control OVER the environment, taking pleasure in independent task choice and completion, finding serenity with self-chosen tasks, gaining respect for self and for tasks chosen, and developing a seriousness of purpose which creates bonds between the child and working adults. Montessori herself made ample mention of this hidden curriculum (especially, for example, in her discussions of the training of will and the meaning of discipline); but of the American writers who looked at her schools and her writings, only a few sensed this, and those who did saw it as an isolated kind of training."(466) Further: "What neither the critics nor even most of the advocates saw was the significance of this program: it taught mastery of self and the building of a long-range cumulative sense of the nature of the world and of the relationship of the individual to the world. Critics did not see the Montessori program, in all its parts as a general principle of learning. If they had, they might have rethought their responses to Montessori."(467) In conclusion, Keough offered a most significant distinction between the goals of progressivism and that of Montessori: "Progressivism sought to make children transactors, dealers with one another, and exchangers, while the Montessori method made them colleagues, brothers and shareholders of the same company."(468) I think Keough has pinpointed the essence of Montessori. And because Montessori's critics had no idea of the scope and nature of her pedagogy, they were unable to offer constructive analyses of it.

The bulk of the criticisms we have examined came from North American educators. It was fascinating to discover that those educators who explored Montessori on the level of its classroom usefulness in a concrete way, i.e., teachers in the field, came away from their experiencing and examination of Montessori with primarily positive opinions. (My sample is not adequate to draw any specific conclusions, however. It is possible that those teachers who did not find anything of value from Montessori simply did not publish their impressions.) In contrast, those who were most critical were the professors of education whose purpose was to evaluate the philosophical and psychological contribution of the Montessori method with respect to their own valued ideas. Kilpatrick and the Gesells did take the opportunity to observe Montessori classes in Italy. They tended to have positive responses to their observations, but were critical of the theory in contrast to their own. Morgan did not observe Montessori classes, or talk with anyone knowledgeable about Montessori--as far as I could tell. He accepted as valid the impressions of kindergarten teachers who used Montessori materials out-of-context, sequence, and at ages not appropriate. Boyd's philosophical bent came from Froebel and Rousseau, Kilpatrick's came from Dewey, and the Gesells' were drawing from their own Child Study Institute. The fact that Montessori was a female from Italy, included religion in her pedagogy, and was unable to communicate with her evaluators in English all served to deny her adequate trial in America.

These educators showed very little grasp of Montessori theory. Their interpretations of purposes and intentions were often based on misunderstanding and inaccurate assumptions. As a result, most of the criticisms examined in this paper were not truly criticisms of Montessori's actual program, but were failures of the critics to analyse that system adequately. In many cases, had the critics taken those ideas to the next step, to examine the truthfulness of what

Montessori had to offer and whether it was valid or not, we would have been given a much more adequate and fertile list of questions. Instead, they got trapped by their own impatience and inability to see the forest for the trees. One important example of this which I have noted in the body of this presentation was their contradictory concern that on the one hand Montessori had created didactic materials which were meant to be used in "the correct way" while, on the other hand, they all had grave concern that the teacher was not to directly "correct the errors" of the child. That Montessori's critics could not see that she was moving this essential feature (of providing some guidelines for what is real and necessary in one's environment) by transforming that role from the teacher to the environment, is no doubt a reason for some of their adverse reactions. The question should be whether this transformation is, in fact, more beneficial than traditional correction techniques.

In some cases the Montessori method has certainly been transformed from the intended open, flexible method of inquiring into the needs of the child and experimenting with methods for providing those needs to a rigid and dogmatic use of a set of materials as well as role of the teacher. In 1913, Ellen Yale Stevens reflected upon the history of Froebel and warned Montessorians to protect the Montessori Method "from a like fate by guarding it from hasty, unconsidered, too literal adoption. Let us study Dr. Montessori's spirit and controlling ideas and then test them by modern child psychology. Let us use her wonderful material as not abusing it but with flexibility and freedom while keeping fast hold of the principles it embodies."(469) The dilemma of how one goes about training large numbers of teachers to be flexible and sensitive and to have vast knowledge, how to use intimate and sensitive knowledge, is the million dollar question. Every "method" of education attracts a certain percentage of followers who need to use it dependently rather than being capable of using it independently (flexibly) for its greatest beneficial value.

Maria Montessori offered the world a whole new perspective on educating the child. Her revolutionary insight was that the educator should draw from within the child and design an environment which would allow the child to construct that inner self. She noted that the child whose inner drives were satisfied learned the traditional materials, i.e., the three R's, as a matter of course. This is in contrast with the attitude that education is a set curriculum of bits of knowledge which a child needs to learn. When we wonder why our high-school and college students do not know how to think, I suggest it is a result of this second form of education which concentrates on details and specific skills as their primary focus rather than as a means for greater endeavors. Exploring the criticisms of Maria Montessori's educational program has led me to realize how much the educational community, as well as eager and desperate parents, have come to rely on the "packaged system." The assumption is that someone, somewhere, should be able to put together an educational program which provides for all the information which young people will need in order to make competent adults. Montessori's emphasis was directed toward the ability to reason, recognizing that the individual who knows how to think can acquire specific knowledge as needed.

A significant reason for the desire for packaged learning may lie with our peculiar American dream: the desire to be able to compartmentalize every factor related to every significant aspect of our lives and still come up with a meaningful and functioning whole. This assembly-line image exaggerates what is going on within our schools, no doubt, but it is not an unfair image. The educational programs which have been packaged for the schools often assume that we can put children along some sort of programmed "conveyor belt" and "have at them." They fail to take into consideration the individual needs, interests and capacities of the children and teachers alike. We have much greater resources devoted to studying the way children respond to particular materials than we do on the essential features of how teachers and children interact with each other in the learning processes.

Our concern for equality has led us to a definition of equal chance for failure rather than for success, because we have come to assume that equality in learning opportunities means we must provide the same, "equal" system to each child, regardless of need. Equal opportunities sometimes means equal chance for boredom, failure, rejection, and disinterest by offering less to everyone rather than the best to all.

As an aside, as it relates to Montessori, I'd like to suggest that the saddest and most obvious sign of our failure to educate the children of this country lies in the "back-to-basics" programs which emphasize academics at the expense of all else. Learning to read, write and manipulate numbers have become the major goals in school districts across this country. We have created such an inadequate system that what should be one of the fundamental goals of education, i.e., learning to think, often gets lost entirely, not to mention all the subjects which make reading, writing and mathematics meaningful. I am not suggesting that "the basics" are not absolutely essential. I agree that they are. But what are they and for what are they essential? I think the academic subjects are the skills by which each individual is introduced to his or her culture. They provide the means by which each child learns about his/her world. They are the means for personal enrichment and satisfaction, opening up an unlimited range of thought-provoking challenges and opportunities. They are not an end in themselves. Why do any of us want to read, for example? We read for information, entertainment, challenge, and other purposes. Why do we think children are any different?

Reading offers each of us a host of different opportunities. The basic skills required for reading can be analyzed and compartmentalized, but from such information we must not conclude that a particular reading program which is designed to address all the necessary elements of reading will satisfy the needs or interests of the individual. With all we know about individual learning capacities we continue to prod groups of children through materials together in much the same way, expecting groups to be able to teach individuals what they need to know. Our challenge in teaching the basics--reading, for example--should be to incite such interest and enthusiasm that each individual is personally motivated to learn, so that "the basics" return to the "essential ingredient" category rather than confounding our "essential goals."

The insights related to this matter offered to us by Montessori is that learning the skill is best separated from using it so that the joy and interest in using those skills are not diminished by the tasks involved in learning them. For instance, Montessori noted that books, in order to be best appreciated and utilized, are for reading, not for teaching reading. The stories between the covers should be enticing and pleasurable to those who are challenging their newly developed skills. For those who must concentrate on the details of learning to read particular words, reading books often becomes drudgery and comprehension of or interest in the stories may be lost entirely.

Maria Montessori put together a comprehensive "prepared environment." But her true genius lay in the understanding she had of what the function and scope of the learning environment are. She was the first to admit that the qualifications she felt were necessary in a learning environment could be satisfied by any number of different learning materials. She became convinced that she had put together an excellent environment for those of us who did not have the creativity or the time to do it all for ourselves. Her sensitivity focused on the needs of the child; needs she discovered only through continuous observation and appreciation for each child's behaviors as the key indicators of developmental needs. Though she developed a massive amount of materials and provided reams of guidelines, they were meant to offer the educator options, not dictums; to provide a perspective on how one translates observations into materials which allow a child to learn freely and joyously. Montessori changed the focus from teaching to learning and revolutionized education by also providing a means for doing it.

The focus on the child rather than on materials to be learned requires significant changes in the classroom. It is not possible to observe and be flexible to the needs of the individual child when the children must rely completely on the teacher for direction. It is not possible when each child is required to do the same thing, in the same way, at the same time as every other child within the class or group. The teacher, as well as the child, must be freed from the traditional methods and limitations of education, which is why Montessori described her ideas as "the new education." She composed a learning environment wherein the individual needs and desires of the child would be fully appreciated and encouraged. She designed materials that provided progressively more challenging tasks, in relation to which each element of the learning environment was recognized and appreciated. Specifically, she provided that the educator, the materials and other physical aspects of the environment as well as each child serve and interact as resources, catalysts, guides. An environment which recognizes and appreciates the needs and interests of each child, by providing choices for selection and self-determination related to what, where, how, and how long within carefully delineated guidelines, offers a whole new perspective in education from what we traditionally find. It was nothing short of revolutionary at the turn of the century.

The challenge of the Montessori teacher is not to teach specific bits of knowledge: it is to provide stimulation and guidance, to provide the environment (to find those materials, tell those stories) in which the children drive themselves to achieve the necessary elements (reading, writing, arithmetic, etc.) in order to function competently in what each will find to be a fascinating, engrossing world. Montessori knew that the specifics were important; but she found that the specifics could be designed into the learning materials themselves so that the educator's energies could be focused on elements materials could not anticipate: the individual needs of the child, including emotional, social and spiritual needs as well as the needs of children interacting together.

In 1907, when the world got its first glimpse of Montessori's initial efforts, people were astounded by the changes and accomplishments observed in the children attending the Casa dei Bambini. Today, when many of the elements of "good education" first offered by Maria Montessori are widespread assumptions, the contrast is not so amazing. The world of education has learned much from Maria Montessori. It has misunderstood much, as well. Just how much is reflected in this study where much of the criticisms I found didn't indicate an adequate comprehension of Montessori. Many were criticisms focused on misinformation and purveying myopic views of what education should be rather tHan noticing what Montessori's ideas truly reflected.

Some final comments from others are appropriate here. First, Nancy McCormick Rambusch wrote: "One need not accept uncritically Montessori's notion of anthropometrics, and one need not imitate the adulation of Montessori's uncritical admirers who state flatly that the ills of the world would have been solved had she been heeded, or will be solved if she now is heeded. An innovator of Maria Montessori's stature needs neither the assent of the world to every particle of her thought, nor the defense of zealots who panic at any form of criticism directed against her. If Montessori has a message for America ... it is because of those of her ideas and methods which relate to present preoccupations and techniques in early education."(470)

An appraisal of Montessori's ideas for today's educators is not within the scope of this examination, though it should now be clear in general terms that Montessori has had a significant impact on or had many ideas consistent with much current educational thought. Rita Kramer wrote: "It is hard to realise today how radical many of its [THE MONTESSORI METHOD] statements were at the time, because so much of it has become part of our body of received ideas."(471) Much later in her book Kramer noted: "[Montessori] passes the test for the real innovator [because] many of her ideas have become part of our common language of discourse about the subject of educating the young."(472)

In 1969 Thomas Banta, pinpointing the essential feature of Montessori as an educational program designed to offer interesting choices for exploration and development, one which seeks to allow the child to become a fully functioning, caring, happy adult, commented: "I am not convinced that there is in practice, at the present time a Montessori method which is vastly different from other methods of nursery education."(473) In this same vein Kramer noted: "Reporting on her death, [1952] the London Times said, 'The final judgement on the system may well be based not so much on the degree to which it has won integral acceptance in the schools, as on the measure wherein its principles have been assimilated into the general consciousness of the race.'"(474) I think it is true that the least essential aspect of Montessori's contributions, the materials, remain the most distinctive and, perhaps, the only distinctive feature of what today is generally considered her contribution to "good teaching."

If anything has become patently clear, it is that much of the misunderstanding of Montessori's theories comes from educators who oversimplified her messages. Each and every point she made was multi-faceted, inter-related and inter-dependent upon numerous factors, none of which was simple to comprehend or appreciate by itself. The way in which most of her critics went about examining Montessori's work was analagous to an architect trying to prove the structural instability of a building by analyzing one wall in isolation. A significant percentage of the criticisms noted in this study would not need to have been raised at all had the critics been able to bring the larger view into focus. That the same confusions persist today speaks to the complex task both of understanding Montessori and of thinking out what is educationally sound by critics and Montessorians alike.

Not only did Montessori's scheme for education include a wholistic approach, recognizing before most that what was traditionally considered to be within the realm of school education was only one part of the larger question of total mental and physical health; but each and every piece of apparatus, presentation, and exercise was designed for multiple purposes. Each material was created to speak to all the dimensions of the child, not isolating the cognitive from the physical, for instance. From the most complex and abstract down to the most basic and concrete activity, each piece of material had multiple direct and indirect purposes. When Montessori stated that two goals in education were biological and social she was talking about much more than her overall scheme. Montessori saw these goals as a necessary qualification for every activity in the environment.

To begin to appreciate the scope of this complete plan is to understand her desperation when educators spoke of using her system eclectically. It wasn't that hers was the only way, nor that no improvements could be made. Montessori seems to have recognized that the materials have no absolute placement in the environment, nor were the materials the most essential feature. In fact, the materials were insignificant in relation to her overall message for education and system of inquiry based upon the direct observation of and response to the child in a free environment. Even though individual parts of her approach are valuable in and of themselves, the "Montessori method" requires that the parts be allowed to function together in order to optimize their value and validity. This doesn't mean a set of materials, this means that the teacher understands how a learning environment is to be used to allow the child to develop his or her own inner resources to learn to be, to think, and to create his or her own competent adult self. This does not mean the materials are of no value--far from it. They are an impressive and useful part of the overall learning environment.

A final quote comes, appropriately, from Mario Montessori Jr., a psychologist: "I consider it significant that Montessori's model of development corresponds in the main with that arrived at by psychoanalysts. In my experience, psychoanalysis is the only branch of empirical science that has accepted the challenge of studying man with this type of composite frame of reference. Neither Montessori nor psychoanalysis tries to simplify or reduce the complexity of the picture of man to fit a special theory. Instead, both acknowledge the diversity of factors determining human development and behavior. They endeavor to cope with them in concordance with the findings obtained by observations of spontaneous behavior in a specially prepared setting. The situation in both cases is so structured that it activates certain aspects of behavior that would not otherwise manifest themselves with the same clarity and continuity. This makes it possible to study phenomena not noticed before."(475) That Montessori's critics missed the essence and vitality of her pedagogy, as described by her grandson above, speaks of their failure to examine Montessori properly. That the "Montessori materials" have come to represent Montessori speaks to the inherent difficulty in trying to convey subtle aspects of education on a large scale.

The task of examining Montessori thoroughly is an immense one, but one I consider important for our understanding of education. Setting aside personal assumptions and conclusions is difficult once an adequate study of what Montessori proposed has been attempted. This study addressed some of the criticisms raised against Montessori's pedagogy. There remains the important task of evaluating Montessori's ideas and conclusions and the difficult challenge of testing them. Initial efforts toward this end through investigational studies attempt to examine the validity of Montessori's theory, but the designs of the studies are not adequate for the questions being raised, for the most part. My hope is that this study will serve as a springboard for more diverse and indepth examinations of Montessori and will challenge educators both pro and con to question more pertinently the assumptions and conclusions by which they direct learning activities.

FOOTNOTES:

1. Radice, Sheila, THE NEW CHILDREN, 1920, 104-105.

2. Margot Waltuch, during a personal interview, described an analogy Montessori used in reference to why Montessori didn't respond to criticism: Montessori depicted herself as climbing a ladder--pursuing knowledge and truth about the nature of the child--with a pack of dogs barking at her ankles. Montessori felt her choice was to either turn around and expend her time and energy futiley attempting to rid herself of annoying, but basically harmless dogs or continue on her way, not allowing the dogs to distract her from her mission in life. Mario Montessori, Maria's son wrote: "[Montessori] followed her own course, guided by what had impressed her as a basic truth, so far ignored, which should be brought to consciousness in those concerned with the human situation. She endeavored to do so. The praise or criticism encountered while performing this task left her unperturbed. What she hoped to achieve was that they would also see this truth and let their actions be guided by it, in THEIR OWN WAY, no matter what they thought of herself and her method." ["Maria Montessori's Contribution to a Better Understanding of the Human Being," 1972, p.20.]

3. I have tried to avoid the use of the term "method" (as in "the Montessori Method"), because it misrepresents Montessori's intent. There was no single "method" of education related to materials or teaching system. This term leaves this unfortunate impression as a result of American publishers transposing her first book, "Scientific Pedagogy as Applied to the Education of Infants," into English under the title, "The Montessori Method."

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5. Lillard, Paula Polk, MONTESSORI--A MODERN APPROACH, 1972, p.120.

6. Kramer, Rita, MARIA MONTESSORI, 1976, p.357.

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12. Gesell, Arnold and Beatrice Gesell, THE NORMAL CHILD AND PRIMARY EDUCATION, 1912, p.328. They quote Maude G. May from THE LONDON JOURNAL OF EDUCATION, "The Montessori Method," September 1909.

13. Ibid., pp.328-329.

14. Morgan, S.A., THE MONTESSORI METHOD: AN EXPOSITION AND CRITICISM, 1912, p.65.

15. O'Shea, Michael Vincent, "The Montessori Method of Teaching," 1912, p.393.

16. Jacoby, George W., "The Montessori Method From a Physician's Point of View," 1913, p.7.

17. Nicholson, Eleanor, "An Analysis of Dewey and Montessori-- Philosophers with Many Similar Concepts," 1979, p.12.

18. Joosten, A.M., "Danger," 1974, p.61.

19. Montessori, Maria, THE SECRET OF CHILDHOOD, 1966, pp.136-137.

20. Ibid., p.136.

21. Ibid.

22. Ibid., pp.138-139.

23. Montessori, Maria, TO EDUCATE THE HUMAN POTENTIAL, 1967 (first English publication in 1948), p.15.

24. Kramer, Rita, op.cit. (note 6), 1976, pp.55-56,73,78-79.
Standing, E.M., op.cit. (note 4), 1957, pp.53-66.

25. Montessori, Maria, THE MONTESSORI METHOD, 1964 (first English publication in 1912), pp.1-16.
Montessori, Maria, THE DISCOVERY OF THE CHILD, 1967 (first English publication in 1956), p.19.

26. Montessori, Maria, THE MONTESSORI METHOD, 1964 (first English publication in 1912), pp.15-17, 228.
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English publication in 1956), pp.9,13,46.

27. Fynne, R.J., MONTESSORI AND HER INSPIRERS, 1924, p.314.

28. Ibid., p.314-315.

29. Green, J.A., "Teachers, Doctors and Madame Montessori," 1913, p.48.

30. Fynne, op.cit. (note 27), p.321.

31. Kramer, op.cit. (note 6), p.376.

32. Montessori, Maria, THE MONTESSORI METHOD, 1964 (first English publication in 1912), pp.1,7-12,109-115.
Montessori, Maria, SPONTANEOUS ACTIVITY IN EDUCATION, 1965 (first English publication in 1917), pp.44,57-86.

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35. Kramer, op.cit. (note 6), p.376.

36. Kilpatrick, William Heard, THE MONTESSORI SYSTEM EXAMINED, 1914, p.5.

37. Montessori, Maria, THE MONTESSORI METHOD, 1964 (first English publication in 1912), p.108.
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APPENDIX A:
WHO'S WHO ... MONTESSORI'S EARLY INTERPRETORS

Predominantly Pro-Montessori:

BAILEY, Carolyn Sherwin
- personal interviews with Montessori
- observed classrooms
- wrote MONTESSORI CHILDREN (1915)

CLAREMONT, Claude
- Educator from England
- life-long associate of Montessori
- wrote dozens of articles

CULVERWELL, Edward P.
- professor at Dublin University
- excellent examination of Montessori, raised important issues and understood Montessori well
- wrote THE MONTESSORI PRINCIPLES AND AND PRACTICES (1914)

GEORGE, Anne
- first American trainee of Montessori
- established Montessori schools in America
- translated English editions of THE MONTESSORI METHOD
- translator for Montessori during training courses
- wrote many articles

Predominantly Critical of Montessori

BALDWIN, W.A.
- American school principal
- wrote "The Conflicting Pedagogy of Madame Montessori" (1913)

BOYD, William
- Scottish educational philosopher
- had many perceptive comments about Montessori, raised serious questions, but misunderstood much
- wrote FROM LOCKE TO MONTESSORI (1914)

DEWEY, John (and daughter Evelyn)
- no background description needed
- shared many points with Montessori, was critical about concerns for creativity, crude materials, and problem solving opportunities
- shared podium with Montessori at educational forums and introduced her at her first address in America

HOLMES, H.W.
- Harvard education professor
- very limited understanding of Montessori concepts...Montessori was very upset with his Introduction to THE MONTESSORI METHOD (1912 edition)
- also wrote other articles

JACOBY, George
- American physician

FYNNE, R.J.
- Dublin educator

-spent several months in Rome with Montessori, discussing and observing

-wrote "The Montessori Method From a Physician's Point of View" (1913)

KIMMINS, Dr.

-chief inspector of London elementary schools

MACCHERONI, Anna Maria

-one of first Montessori trained teachers

-life-long associate of Montessori

-wrote A TRUE ROMANCE (1947)

MaCLEAR, Martha

-wrote of application of Montessori principles ... especially within Froebelian Kindergartens

-wrote THE KINDERGARTEN AND THE MONTESSORI METHOD--AN ATTEMPT AT SYNTHESIS (1915)

MERRILL, Jenny

-supervisor of kindergartens in Manhatten area

-on editorial committee of educational journal

-did not fully understand Montessori's purposes or specific use of arts and crafts

-wrote a series of articles for THE KINDERGARTEN-PRIMARY MAGAZINE

NAUMBERG, Margaret

-social researcher

-Montessori training in 1913

-went on to create Walden Schools

-wrote "Maria Montessori--Friend of Children" (1913)

PARKHURST, Helen

-early American Montessori trainee

-went on to develop THE DALTON PLAN

NUNN, Sir Thomas Percy

-British educator

-wrote EDUCATION: ITS DATA AND FIRST PRINCIPLES (1930)

-wrote MONTESSORI AND HER INSPIRERS (1924)

GESELL, Arnold and Beatrice

-Child Study Institute innovators

-visited Rome, observed classes but don't know of any direct contact with Montessori

-child psychologists

-wrote chapter "Montessori Kindergarten" in book THE NORMAL CHILD AND PRIMARY EDUCATION (1912)

HARTMANN, W.N.

-kindergarten specialist

HOLMES, W.H.

-superintendent of Westerly, Rhode Island School District

-wrote "Montessori Methods" (1912)

KILPATRICK, William Heard

-student of John Dewey

-popular American progressive professor of education at

-visited Rome, spoke with Montessori through what has been described as an inadequate interpretor

-wrote THE MONTESSORI SYSTEM EXAMINED (1914) and several related articles

PELLER, Lili (Roubiczek)
- 1921 Montessori training
- directed Vienna Montessori School 1920's-30's until Fascists took over
- worked closely with Anna Freud at Montessori school
- well-known psychoanalyst, came to America before World War II
- wrote ON DEVELOPMENT AND EDUCATION OF YOUNG CHILDREN (1978)

RADICE, Sheila
- editor and journalist for TIMES EDUCATIONAL SUPPLEMENT (London)
- six months in Rome, investigating Montessori, conducting interviews with her and observing schools
- wrote THE NEW CHILDREN (1920)

RUSK, Robert Rusk
- British educator
- wrote A HISTORY OF INFANT EDUCATION (1941) and DOCTRINES OF THE GREAT EDUCATORS (1969) with a chapter on Montessori

SMITH, Theodate
- applied Montessori principles to American kindergarten
- wrote THE MONTESSORI SYSTEM IN THEORY AND PRACTICE (1912)

STANDING, E.M.
- student of philosophy
- life-long associate of Montessori
- Montessori's first biographer, asked by Montessori to create a complete synopsis of Montessori in theory and practice, with background information...took 25 years to complete
- wrote MARIA MONTESSORI: HER LIFE AND WORK (1957) and THE MONTESSORI REVOLUTION IN EDUCATION (1966)

STEVENS, Ellen Yale
- elementary school principal
- student of Thorndike and Dewey
- visited Rome, observed classrooms and interviewed Montessori
- wrote several articles for McClure Magazine and GUIDE TO THE MONTESSORI METHOD (1913)

MORGAN, S.A.
- Canadian professor of education
- wrote THE MONTESSORI METHOD: AN EXPOSITION AND CRITICISM (1914)

O'SHEA, Michael Vincent
- child study movement leader in America
- wrote "The Montessori Method of Teaching" (1912)

SHAW, Elizabeth Ross
- Child study movement proponent
- wrote "The Effect of the Scientific Spirit in Education upon the Kindergarten in Relation to the Distinctive Characteristics of the Montessori Method" (1913)

WARD, Florence Elizabeth

-professor of education at Iowa State Teachers College
-went to Rome to investigate Montessori to be qualified to lead education seminars
-wrote THE MONTESSORI METHOD AND THE AMERICAN SCHOOL (1913)

WHITE, Jessie
-wrote MONTESSORI SCHOOLS AS SEEN IN THE EARLY SUMMER OF 1913 (1914)

APPENDIX B:

MONTESSORI'S BASIC PRINCIPLES, CONTRIBUTIONS AS ANALYSED BY OTHERS:

E.M. Standing, from THE MONTESSORI REVOLUTION IN EDUCATION (1966):
"The Twelve Points of the Montessori Method":

"1. It is based on years of patient observation of child nature by the greatest educational genius since Froebel.
2. It has proved itself of universal application. Within a single generation it has been tried with complete success with children of almost every civilised nation. Race, color, climate, nationality, social rank, type of civilisation—all these make no difference to its successful application.
3. It has revealed the small child as a lover of work, intellectual work, spontaneously chosed and carried out with profound joy.
4. It is based on the child's imperious need to learn by doing. At each stage in the child's mental growth, corresponding occupations are provided by means of which he develops his faculties.
5. While it offers the child a maximum of spontaneity, it nevertheless enables him to reach the same, or even a higher, level of scholastic attainment as under the old systems.
6. Though it does away with the necessity of coercion by means of rewards and punishments, it achieves a higher discipline which originates within the child and is not imposed from without.
7. It is based on a profound respect for the child's personality and removes from him the preponderating influence of the adult, thus leaving him room to grow in biological independence. Hence the child is allowed a large measure of liberty (not license) which forms the basis of real discipline.
8. It enables the teacher to deal with each child individually in each subject, and thus guide him according to his individual requirements.
9. Each child works at his own pace. Hence the quick child is not held back by the slow, nor is the latter, in trying to keep up with the former, obliged to flounder along hopelessly out of his depth. Each stone in the mental edifice is 'well and truly laid' before the next is added.
10. It does away with the competitive spirit and its train of baneful results. More than this, at every turn it presents endless opportunities among the children for mutual help—which is joyfully given and gratefully received.
11. Since the child works from his own free choice, without competition and coercion, he is freed from danger of overstrain, feelings of inferiority, and other experiences which are apt to be the unconscious cause of profound mental disturbances in later life.
12. Finally, the Montessori method develops the whole personality of the child, not merely his intellectual faculties but also his powers of deliberation, initiative and independent choice, with their emotional complements. By living as a free member of a real social community,

the child is trained in those fundamental social qualities which form the basis of good citizenship." (pages 204-205)

Thomas Banta, from "Montessori: Myth or Reality," (1972): "Key premises of Montessori education are:

1. Children are to be respected as being different from adults, and as individuals who differ from each other.
2. The child possesses unusual sensitivity and mental powers for absorbing and learning from his environment that are unlike those of the adult both in quality and capacity.
3. The most important years of growth are the first six years of life when unconscious learning is gradually brought to the conscious level.
4. The child has a deep love and need for purposeful work. He works, however, not as an adult for profit and completion of a job, but for the sake of the activity itself. It is this activity which accomplishes for him his most important goal: the development of himself--his mental, physical and psychological powers.

It is well agreed within the Montessori movement that these are fundamental ideals to be pursued in early education. Not too much emphasis on curriculum and content, but more emphasis on style and approach toward purposeful, self-chosen work. Thus, such brief description for the general public constitutes a mythic ideal, which is something to aim at." (pages 220-221)

R.C. Orem, from MONTESSORI TODAY: A REVIEW OF THE PROGRAMS, INNOVATIONS AND SUCCESSES OF MORE THAN 100 MONTESSORI SCHOOLS, (1971): "Twelve Cardinal Points of the Montessori Method":

"1. TRAINING IN OBSERVATION FOR PERCEPTUAL, THEN CONCEPTUAL PROFICIENCY

The Montessori-trained child becomes an increasingly accurate and rapid perceiver and classifier in tasks ranging from concrete sensory discrimination to abstract intellectual decisions.

2. PROGRAMMED PREPARATION, PRACTICE, PRECISION, AND PERFECTION

The child's work with the Montessori 'didactic apparatus' involves sequentially ever more complex sensory, motor, and intellectual exercises for sense training, muscular coordination, and mental development.

In the Montessori environment, the child has adequate preparation and practice to develop proficiency in individual and social skills.

3. SELF-PROCESS AND INDIVIDUALITY

The intrinsically motivated, 'normalized'* child strives for mastery of self and environment, achieving auto-construction, self-development, and self-discipline through auto-education. He work at his own pace on self-selected Montessori materials and exercises.

4. MOVEMENT, ACTIVITY, AND WORK

Montessori 'active education' involves the child in sensory training for perceptual efficiency, movement in muscular education, and the application of knowledge gained through intellectual work. Concentration, tactile manipulation, and exercises of practical life are also important in 'learning to do by doing.' By completing cycles of interest, activity, and work, the child learns 'habits of work and order.'

5. FREEDOM AND SPONTANEITY

The child growing under laws of natural development achieves ever greater independence, expressing spontaneous individuality through immersion in interesting self-chosen tasks in an 'expansive education.'

6. PREPARED ENVIRONMENT

   The Montessori milieu with stimuli measured by gradients of material containing control of error provides an 'adaptive environment' to meet the child's inner needs for full functioning of his learning capacities.

7. SENSITIVE PERIODS

   During his development, the child experiences a series of crucial transitory periods of special sensitive to particular learnings.

   The child's 'great work' from birth to age six ('formative period') is to absorb and organize environmental stimuli, under the guidance of his unique laws of learning, to 'make' his self ('auto-construction').

8. RHYTHM--BALANCE--ORDER

   In nature and the universe, order and continuity make the life process possible.

   Man, a 'creature of rhythm,' requires self-control and social cohesiveness--liberty within limits--for optimum development of his physical, emotional, mental, and spiritual 'energies.'

9. DISCOVERY AND DEVELOPMENT

   Objective study of normal, natural development from birth onward and skilled observation of free children at work in an experimental 'learning laboratory' will culminate in a 'science of child care' and scientific pedagogy, both of which will contribute to the emergence of superior human beings--'new mankind' able to master the new environment.

10. THE CHILD AS MAN-TO-BE

    The adult must be centrally concerned with all hygienic prerequisites for realizing the child's potential, indirectly serving child's inner drive for self-actualization and demonstrating faith in the 'man to be' while respecting his rights.

11. NEW TEACHER AS EXEMPLAR

    The montessori teacher (directress) prepared in 'spirit and skills,' is a careful observer, reflects the best values, guards the learning process, communicates effectively with the child, and programs his educative development creatively.

12. TO KNOW, LOVE, AND SERVE

    The 'new man' balances meditation with action and concern for the collective interest with his individual perfectionment. His three-fold mission is to know, love, and serve.

*Montessori uses the term 'normalized' to refer to the self-confident, competent learner, phsycially and psychically healthy. In contrast is the 'deviated' child, one who has been denied the full development of his potential for creative functioning." (pages 18-20)

Rita Kramer, from biography MARIA MONTESSORI, (1976): "A random list of ideas, techniques, and objects familiar to everyone in the field of childhood education today, all of which go back to Montessori's work at the start of the century, all of which she either invented or used in a new way, might include:

-the concept that children learn through play and the ubiquitous 'educational' toys and puzzles that stimulate early reading and writing and basic math skills as well as programmed 'teaching machines' and child-scaled furniture;

-the 'open classroom' of the British infant and primary school model, the 'ungraded' class in which children are grouped by interest and ability rather than age and in which there is individually paced instruction, the child given the the freedom to proceed at his own rate—grading the material the children have access to but not arbitrarily grading the children;

-the idea of the child as different from, not just a smaller edition of the adult;

-the observation that infants are learning from birth on, that age six is late to start thinking of the child's education and three is not too early to begin schooling of the right kind;

-the importance of the environment in which learning is to take place;

-the significance of early stimulation for later learning and its implications for the education of the culturally impoverished child;

-the observation that child take a natural pleasure in learning to master their environment and that this mastery, beginning with the manipulationg of objects, is the basis of the sense of competence necessary for independence;

-the judgment that real learning involves the ability to do things for one's self, not the passive reception of a body of knowledge;

-that the things that teach—the child's learning materials—should be intrinsically interesting and self-correcting, should train the senses in the perception of and therefore in the ability to deal with reality;

-that imposing immobility and silence hampers children's learning and that given interesting work to do children will establish their own order and quiet;

-the concept of 'sensitive periods,' phases of development appropriate to the learning of specific motor and cognitive skills such as 'reading readiness';

-the right of every child to develop his own fullest potential and the idea that the school exists to implement that right;

-the idea that the school must be part of the community and involve the parents if education is to be effective.

If the objects sound old hat and the ideas like truisms, that in itself is proof of how right Montessori was about how many things. Her contemporaries in the field of education did not find them so natural or obvious." (pages 373-374)

R.C. Orem, from MONTESSORI AND THE SPECIAL CHILD, (1969): "Insights":

1. The three-part Montessori method includes education of the senses, which employs a systematic methodology and materials; the other parts are motor or muscular education, and intellectual education, which features language development.
2. Education of the senses or sensory education is interwoven with

language development; for example, when the child is learning to differentiate the length of rods he is concurrently learning a precise vocabulary: small, smaller, smallest, etc.

3. Stages in the education of the sense include: (1) recognition of identities, (2) recognition of contrasts, and (3) ever-finer discrimination involving very similar qualities and dimensions.

4. The didactic material, which montessori developed in experiments with children, can be thought of as 'materialized abstractions'; that is, the materials provide, in an orderly manner, standards of form, size, weight, color, texture, etc., against which the child can measure his observations and perceptions.

5. The child may learn to use a piece of the material by having the give him a presentation or explanation, or he may learn by watching her instruct others; or he may learn simply by watching other children who have already learned to use it. He may, as Montessori put it 'experiment with intelligent modifications,' but he is not allowed to abuse or damage the material, and he must return it ready for the next user when he is finished with it.

6. The child needs to move as he learns, and he needs to learn coordination of his movements. Features of the prepared environment such as carpeted work space[*] on the floor, exercises of practical life, and light, moveable furniture encourage movement.

7. Montessori believed that the teacher should assist the child to follow his own natural laws of development; the teacher should be concerned that the child receives an adequate diet essential for healthy development.

8. Montessori used the term 'normalized' to describe a child who has been freed in a secure, yet stimulating environment to function normally; the 'deviated' child has suffered distoritons of or departures from normal development." (pages 63-64)

*Author's note: Carpeted work space is not always considered a positive aspect of a learning environment. Practical life exercises which require water are extremely difficult to successfully clean up when drips or spills occur. Art work areas require clean-up-able floors, as well. The control of movement challenge of walking silently, for instance, is diminished by the muffled sounds coming from carpets. On the other hand, covering up cold floors allows greater access to floor activities. The best compromise seems to be to have a classroom which is partially carpeted.

Mario Montessori Jr., from "Montessori Education and Modern Psychology" (1962): Showing that "the principles which are followed in the application of Montessori education meet the demands of modern psychology.

1. Education must help the child in the development of its personality in accordance with its nature, possibilities and rate of development so that it can later fulfill its task as an independent, balanced human being in the adult community. The aim is therefore always the formation of the total personality, not of independent functions or processes.

2. To achieve this, optimal conditions must be looked for in the relationship with the child and in the preparation of its environment in order to conduct, stimulate and positively support this spontaneous process. When one is successful in this one sees a change taking place which has been called by Montessori 'normalisation' and which brings forth a new type of child. Indeed the description of the potentialities of the child in

comparison with adult ersonality also rests on a typological principle of organisation.

3. The child wants to become adult and strives after this goal independently, prompted by inner needs. Education must assist him in this task of inner development. Therefore it is necessary to understand his psychic activity from the point of view of this final aim, so that adequate help can be offered.

4. Much of his activity is apparently meaningless. From the concentration with which the small child devotes himself to his activities it is nevertheless evident that they must be important to him. In the pesence of this phenomenon the Montessori teacher must withdraw and allow the child to proceed without interruption.

Much of the developmental material has been constructed in such a way that it can serve as an aid to the indirect preparation of functions which will only later manifest themselves as new personality acquisitions with their full significance for the life of the child.

5. Only then can the meaning of the single phenomenon be grasped in its correct context, or be interpreted. This is why in Montessori education the self-activity of the child is respected and an attempt is made to penetrate into 'the secret of childhood' via its spontaneous manifestations. The Montessori teacher is trained to observe the child and to make reports of these observations so that the various kinds of behaviour of the child can be studied in thhe meaningful context of the whole personality in action within the pedagogical situation.

6. The school must be a cultural environment, i.e. the child must be given the opportunity to become familiar with the basic aspects of its own culture. During the first years of life the absorbent mind has already enabled the child to incorporate the fundamental patterns of culture found in its environment in association with adults. It then proceeds to give them form and content in a personal way. The school must offer the child this possibility and enlarge its cultural horizon in a way that not only the intellectual but also the spiritual development is supported.

7. For the spiritual core of Man is already present in the Child and from within directs the psychic development by means of special sensitivities and needs which spur the conscious Ego of the child, if given the chance, to specific activities.

8. The Montessori material is so constructed as to appeal to these inner needs and to offer the child the opportunity to work independently and to make its own experiences with it. Although the entire personality is involved since it demands for its handling the coordination of different functions, one single property is accentuated in each subdivision of the of the material. The child is thus invited to direct its attention to a special objective quality, so chosen that it is attuned to a specific psychic activity, while the manipulation of that material requires determined actions. By means of the 'control of error| the child is made aware by the material that something is wrong, if it has not been done correctly. The intelligence is then challenged to find a better solution. In this way, the Ego functions are differentiated, trained and integrated without strain and more or less playfully, while the Ego of the child is stimulated to perform meaningful acts.

9. This is possible because the material takes into account the inner needs of the child in the course of its development. It has therefore an inviting character with an emotional appeal, which arouses the interest of the child, stimulating its activity as well as its concentration. The motto of

Montessori education, derived from the utterance o a toddler: 'Help me to do it myself' implies the acknowledgement of the child as a striving subject with its own aims and needs, which are also indicated by the so-called 'sensitive periods.'
10. That social training is also a fundamental characteristic of this education has already been dealt with extensively in another article so that it is sufficient just to mention it here.
11. As far as teaching is concerned Montessori was of the opinion that the emphasis on the intellectual aspect in learning is principally wrong. The personality is a psychosomatic unity and must as such also recieve full acknowledgement in the learning process. Not passive absorption but intelligent action is prominent. Learning is a dynamic process in which the whole personality of the child must be actively engaged. This possibility is offered him by the material. The coordination of the movements, the self-activity, and the freedom of movement in the classroom also belong to this principle, which has already been formulated by Montessori half a century ago. {Now three-quarters of a century.}
12. In conclusion it may be mentioned that the free choice of activity which confronts the child with alternatives and which therefore teaches it to become independent, is a Montessori principle 'par excellence.' The formal classical approach excludes, by definition, the possibility to take this fundamental aspect of man's existence into account in education. By imposing the same task on the group, the alternative is degraded to a necessity with the pupils." (pages 5-7) {This list is replicated in the publication of his book EDUCATION FOR HUMAN DEVELOPMENT (1976), pages 41-43.}

Paula Polk Lillard's entire book, MONTESSORI--A MODERN APPROACH (1972), is devoted to explaining the basic principles of Montessori. I have sketched some highlights, briefly: {This book is an excellent initial introduction to Montessori and is readily available.}

"There are two key components to the Montessori method: the environment, including the educational materials and exercises; and the teachers who prepare this environment." (page 50)

"There are six basic components to the Montessori classroom environment. They deal with the concepts of freedom, structure and order, reality and nature, beauty and atmosphere, the Montessori materials, and the development of community life." (page 51, detailed examination of these points follow)

The second chapter describing "The Montessori Philosophy" included:
"Childhood as an Entity in Itself
The Child's Inborn Powers
The Role of Environment and Freedom
The Psychic Unity of Mind and Body
The Intrinsic Motivation of the Child
The Sensitive Periods
The Absorbent Mind
A New Goal For Education
The Natural Laws of Development" (page XV, chapter includes pages 29-49)

Mary Leonard Talbot Fugina's dissertation, "Origins and Current Status of the Montessori Movement in the United States," (1963), listed Montessori's basic theories:
-even small children have a profound sense of personal dignity

- -the duty of adults is to encourage personal and external exploration and discovery
- -the adult's duty is to observe and to be available for explanation, verification, extensions
- -disagreeable traits in children is caused by deviation of the child's vital energy from their normal constructive channels
- -work is the activity which involved the child, his being; his thinking and moving leads to the construction of his personality
- -work is a form of self-expression a bring a child joy in the performance of it
- -if children are inattentive, uninterested, uncomprehending, it is the fault of the method used...a barrier to the functioning of the child's mind
- -satisfied children show characteristics of orderliness, love of work, ability to concentration, independence, initiative and self-control
- -there are fundamental differences between the child and the adult... different tasks...becoming vs. developed...sense of work, its purpose, creating...internal vs. external
- -punishment deflects the learner from learning...is morally inadequate and degrading
- -the learner is not a passive recipient; the learner is a doer, involved in a dynamic learning process involving the whole being...Fugina noted this principle of Montessori's was fifty years ahead of the proclamations of Buhler, Rogers and Maslow...

Pauline Eva Foster from masters thesis, "Montessori: How and Why It Works," (1972): Montessori's main points:

a) freedom to actualize
b) self-discipline and its development
c) necessity of being one's self
d) working with natural laws
e) allowing children to work with the natural laws of being
f) strives for healthy self-concept
g) independence within culture, mastery of environment
h) value of self-selection of educational task ("the match")
i) the right to error and self correction
j) necessity of completion of task as a catharsis

Emma Plank from "Reflections on the Revival of the Montessori Method" (1962 and 1966):

"Some differences which distinguish the Montessori system from methods more accepted in America come to mind:

1. Montessori lays less stress on interaction of children and interaction between teacher and child.
2. Montessori lays less stress on creativity in the arts, but more on creativity in learning.
3. Montessori emphasizes the stronger structure of the environment and the teaching equipment with specific learning tasks in mind.

The changes in values is interesting. When I taught children by the Montessori method some twenty-five years ago, the question was raised by the public whether our children would learn enough, since there were so many activities in our classrooms to distract them and there was no formal drill.

Today we worry about the opposite." (page 44, MONTESSORI IN PERSPECTIVE)

APPENDIX C

SENSITIVE PERIODS OF THE CHILD'S ABSORBENT MIND

As is described in the main text above, Montessori observed special, unconscious sensitivities within the child toward his/her physical and social environment. Montessori theorized that if these needs and sensitivities were met in the environment during these periods, the adult-to-be would be internally competent and independent of those elements in the external environment. For example, if the young child experiences order in the environment, he/she will internalize that order and will not be dependent upon external order...will be able to function even if surrounded by chaos. The list below offers a perspective on the scope of these "sensitive periods" and ages during which these sensitive periods were most frequently observed:

Language:	birth to six years
Order:	two and one-half to four years (Montessori described the need for order extending especially from six months to four years)
Sensory exploration:	two and one-half to six years
Dimension:	occurs during the third year
Color:	occurs during the third year, frequently noted at three and one-half years
Pitch:	two and one-half to four years
Writing:	three and one-half through four and one-half years
Reading:	four and one-half through five years
Numbers, math concepts:	four through seven years
Grace and Courtesy:	three through seven years
Social instinct (herd instinct):	six through twelve years
Function of language:	six through twelve years
Conscience:	six through twelve years
Model values:	six through twelve years
Reasoning:	six through twelve years
Social man appears:	twelve through fifteen years
Self-consciousness:	twelve through eighteen years

Though it is not within the scope of this study, it should be instructive to compare this list of Montessori's, derived three-quarters of a century ago, with current thought in psychology and education.

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